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PTO-1590 (8-01)

SEARCH REQUEST FORM

Access DB#_

Scientific and Technical Information Center

			_		1112.10-	
	Requester's Full Name: M. A. W. Art Unit: 1652 Phone N	4/L10/WA-1 umber 30 <u>5 - 727</u> 0	Examiner # : 789	201 Date: 6	4/2/40/3	
	Mail Box and Bldg/Room Location	10.06 Res	ults Format Preferred	(circle): PAPER	DISK E-MAIL	
	If more than one search is submi	tted nlease prioriti	ze searches in orde	r of need.		
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	Please provide a detailed statement of the s Include the elected species or structures, ke utility of the invention. Define any terms t known. Please attach a copy of the cover sl	ywords, synonyms, acroi hat may have a special m	nyms, and registry number eaning. Give examples of	ers, and combine wi	th the concept or	
	Title of Invention:	force musc.	- Land - 2	Peptiale	Subfactes	3
	Inventors (please provide full names):	FOURIE @	tol	V	and Mes	hod
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Qy INLIGWASILICAFRIPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEVQERAEPPGH	RESULT 1 US-09-122-126B-15 Sequence 15, Application US/09122126B Patent No. 6451573. GENERAL INFORMATION: APPLICANT: Bristol-Myers Squibb Company TITLE OF INVENTION: AGGRECAN DEGRADING METALLO PROTEASES FILE REFERENCE: DM6909 CURRENT PILING DATE: 1998-07-24 NUMBER OF SEQ ID NOS: 21 SOFTWARE: Patentin version 3.0 SEQ ID NO 15 LENGTH: 930 TYPE: PAT ORGANISM: Homo sapiens US-09-122-126B-15 Query Match Best Local Similarity 99.8%; pred. No. 3.5e-238; Matches 481; Conservative 0; Mismatches 1; Indels	28 263 10.1 855 4 US-09-020-048-2 29 248 9.5 621 4 US-09-026-001A-18 Sec 30 246 9.4 621 4 US-09-026-001A-6 31 239 9.1 613 4 US-09-026-001A-10 32 233 8.9 462 4 US-09-411-329C-17 34 231 8.8 464 4 US-09-411-329C-17 35 229.5 8.8 470 1 US-09-411-329C-14 36 229.5 8.8 470 2 US-08-813-150-2 37 228.5 8.7 616 4 US-09-608-790-1 38 226.5 8.7 470 3 US-08-813-150-2 39 224.5 8.7 470 3 US-09-026-001A-12 39 224.5 8.4 521 4 US-09-026-001A-12 39 224.5 8.4 521 4 US-09-026-001A-13 39 224.5 8.1 439 4 US-09-026-001A-14 30 213 8.1 592 4 US-09-026-001A-14 31 8.1 439 4 US-09-026-001A-14 32 209.5 8.0 488 1 US-08-243-542-1 39 254-24 Sec 30 254-243-542-1 30 256-243-542-1 30 256-243-542-1
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GENERAL INFORMATION: .

APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zir
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 930
TYPE: PRT
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                                                                                                                LPRKQILG 482
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                                                                                                                                                                                                                                                                                                                                     APQLLDHSAFSPSGNAGPQTWWRRRRRSISRARQVELLLVADSSMARMYGRGLQHYLLTM
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                                                                                                                                                                                                                                                                                                                                                                                                                      EEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAAL 234
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; Patent No. 6416974;
; GENERAL INFORMATION:
APPLICANT: HOITZMAN, Douglas A.
APPLICANT: Goodearl, Andrew D.J.
TITLE OF INVENTION: TANGO-71, TANGO-74, TANFILLE APPLICATION TANGO-71, TANGO-74, TANGO
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US-09-369-364A-9
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APPLICANT: Apte, Suneer
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
                                                                                                                                                                                                                         Sequence 9, Application US/09369364A Patent No. 6391610 GENERAL INFORMATION:
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                      SPCSAYMITSFLDNGHGECLMDKPQNPIQLPGD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SKCTSATITEFLDDGHGNCLLDLPRKQI-LGGD 484
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAQDKAGQPPT-----AAAAAQPRRRQGEEVQERAEP----PGHPHPLAQRRRSKGL
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CURRENT APPLICATION NUMBER: US/09/122,126B
CURRENT FILING DATE: 1998-07-24
NUMBER OF SEQ ID NOS: 21
SOFTWARE: PatentIn version 3.0
SEQ ID NO 2
LENGTH: 837
LENGTH: 837
ORGANISM: Homo sapiens
US-09-122-126B-2
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TYPE: PRT
; ORGANISM: Mus musculus ADAMTS-8
US-09-369-364A-9
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US-09-122-126B-2
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                                                                                                                                                                                                                                                                                 Sequence 2, Application US/09122126B Patent No. 6451575
GENERAL INFORMATION:
APPLICANT: Bristol-Myers Squibb Comparing APPLICANT: Bristol-Myers Squibb Comparing APPLICANT AGRECAN DEGRAD
                                               Query Match
Best Local Similarity
Matches 172; Conserva
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SOFTWARE: Patentin Ve
SEQ ID NO 9
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                                                                                                                                                                                                                                                                     FILE REFERENCE: DM6909
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TEFLDDGHGNCLLDLPR------
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLDQPHRLQRWGPGQRREDPGLAAAEVF-----PLPQGLEWEVEMGNGQGQERS 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FVPAGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGP 172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GWPPLLLLLLQLP------PPPLVCGAPAGPGTGAQASELVVPTRLPGS 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GWASLLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAAQPRRRQGEEVQERAEP---PGH 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CKWQHQHNQLGDDHEEHYDAAILFTREDLCGH-HSCDTLGMADVGTICSPERSCAVIEDD 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNEEDKKQDKEGLLKETEDSRKVPPPFGSK-----TRSKRFVSEARFVETLLVADASMAA 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----WAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHA 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSAAAGGEPG----LRGCFFSGTVNGERESLAAMSCVAGWSGSFLLAGEEFTIQPQGAGD 144
                                                                                                                                                                                                                                                                                                                                                                                                                                         TELLDDGHGDCLLDAPTSVLPLPTGLPGHSTLYELDQQCKQIFGPDFR 476
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AGGRECAN DEGRADING METALLO
                                               25.2%; score 658.5; DB 4; 33.9%; Pred. No. 5.9e-55; tive 63; Mismatches 156;
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US-09-369-364A-11
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                                                                                                                                                                                                                      Matches 106;
                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                  LENGTH: 245
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 437
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                114 VPAGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGG-LDGFFAVKHARYTLKPLLRGP 172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSGRAALASQULDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRGL 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GHGNCLLDLPRKQI-----LGGDYKDD 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETP--ASTPEAH---EHAPAHSN 227
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                             VVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHS-C 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDN
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RLMSSILTSIDASKPWSKCTS 457
                                                                                            VLIVEDEKWGPEVSDNGGLTLRNFCNWQRRFNQPSDRHPEHYDTAILLTRQNFCGQEGLC 136
                                                                                                                                                       RTKREVSEAREVETLLVADASMAAFYGADLQNHILTLMSVAARIYKHPSIKNSINLMVVK 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -SGQGPMC-----NVKAPLGSPSPRP--RRAKRFASLSRFVETLVVADDKMAAFHGAGL 238
                                                                                                                                                                                                                                                                                                                                                                 PatentIn
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                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                  sapiens ADAMTS-8
                                                                                                                                                                                                                                21.7%;
52.7%;
                                                                                                                                                                                                                   3; Score 567.5; DB 4
; Pred. No. 5.9e-47;
33; Mismatches 61
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HVMAPLFVHLNQTLPWSPCSA

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; 'LOCATION: (468)
; OTHER INFORMATION: Xaa =
; NAME/KEY: MOD_RES
; LOCATION: (521)
; OTHER INFORMATION: Xaa =
US-09-369-364A-13
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APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Van
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                                                                                                                                                                                                                                            GPQT----WWRRRRRSISRARQVELLLVADASMARLYGRGLQHYLLTLASIANRLYSHAS
                                                                                        REDLC-GHHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKF 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VSPIRVNALGEPFPTNVHFKRTRRSINSATDPWPAFASSSSSSTSSQAHYRLSAFGQQFL 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---ERAEPPGHPHPL-AQRRRSKGLVQNIDQLY-----SGGGKVGYLVYAGGRRFL 99
CKEE-GVKSPQHVMAPTLNFYTNPWMWSKCSRKYITEFLDTGYGECLLNEPESR 449
                              CEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQ 479
                                                                                                                                                                                TENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFT 366
                                                                                                                                                                                                                    TDNTREKRTHRRTKRFLSYPRFVEVLVVADNRMVSYHGENLQHYILTLMSIVASIYKDPS
                                                                                                                                                                                                                                                                                                                                 RASCETPASTPEAHEHAPAHS------NPSGRAALASQLLDQSALSPAGGS
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                                                                                                                                                                                                                                                                                                                                                                                                                                               FNLTAN----AGFIAPLFTVTLLGTPGVNQTKFYSEEEAELKHCFYKRLCOYOLRA--- 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LDLERDGSVGIAGFV------PAGGGT---SAPWRHRSHCFYRGTVDGSPRSLAV 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VSWATLLTLLVR-DLAEMG------SPDAAAAVRKDRLHPRQVKLLETLSEYEI
                                                                       RQDICRAHDKCDTLGLAELGTICDPYRSCSISEDSGLSTAFTIAHELGHVFNMPHDDNNK
                                                                                                                                               IGNLINIVIVNLIVIHNEQDGPSISFNAQTTLKNFCQWQHSNSPGG----IHHDTAVLLT
                                                                                                                                                                                                                                                                                                ----NEHKNRHSKDKKKTRARKWGERINLAGDVAALNSGLATEAFSAYGNK 220
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29.6%;
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RESULT 8 US-09-369-364A-15

Conservative

27;

Mismatches

1;

Gaps

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APPLICANT: Hurskainen, Tiliu ...

APPLICANT: Hirohata, Satoshi

TITLE OF INVENTION: Nucleic Acids Encoding Zin

FILE REFERENCE: 26473/4007/10-30-00

CURRENT APPLICATION NUMBER: US/09/369,364A

CURRENT FILING DATE: 1999-08-06

NUMBER OF SEO ID NOS: 31

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 15

LENGTH: 874

TYPE: PRT

ORGANISM: Mus musculus ADAMTS-9

US-09-369-364A-15
                                                                           ; SEQ ID NO 13
; LENGTH: 608
; TYPE: PRT
; ORGANISM: MUS I
US-09-130-491-13
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US-09-130-491-13
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Best Local Similarity
Matches 133; Conserv
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Best Local Similarity Matches 97; Conserv
                                     Query Match
                                                                                                                                                                                                                                       APPLICANT: Holtzman, Douglas A.
APPLICANT: GOOdearl, Andrew D.J.
TITLE OF INVENTION: TANGO-71, TANGO-73, TANGO-74,
FILE REFERENCE: 09404/041001
CURRENT APPLICATION NUMBER: US/09/130,491
CURRENT FILING DATE: 1998-08-07
EARLIER APPLICATION NUMBER: US 60/058,108
EARLIER FILING DATE: 1997-09-05
EARLIER APPLICATION NUMBER: US 60/054,961
                                                                                                                                                                                                    EARLIER FILING DATE: 1997-08-06 NUMBER OF SEQ ID NOS: 16
                                                                                                                                                                                   SOFTWARE: FastSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417 GLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLP 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    103 KVLSGYSNQTNNTRDRWNHKRTKRFLSYPRFYEVMVVADHRMVLYHGANLQHYILTLMSI
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Hurskainen, Tiina L.
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                21.0%;
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Pred. No. 2e-45;
0; Mismatches 126;
                Score 549.5;
Pred. No. 1.3
                                        DB 4;
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NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 7
LENGTH: 997
TYPE: PRT
ORGANISM: Homo sapiens ADAMTS-7
US-09-369-364A-7
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TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
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APPLICANT: Hurskainen,
APPLICANT: Hirohata, S.
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                              444 TSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQIL 481
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHSCD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RAEPPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGF 113
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                                                                                                                                                       LLLCA----LAPGAPGPAPGRATEGRAALDIVHPVRVDAGGSFLSYELWPRALRKRDVSV 74
LYDAAPLTWSRCSRQYITRFLDRGWGLCLDDPPAKDII 457
                                                                                    ICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDS-KFCEETFGSTEDKR--LMSSIL 443
                                                                                                                                     KITHHADNTLKSFCKWQKSINMKGDAHPLHHDTAILLTRKDLCAAMNRPCETLGLSHVAG 364
                                                                                                                                                                                                        ETLVVADAKMVEYHGQPQVESYVLTIMNMVAGLFHDPSIGNPIHITIVRLVLLEDEEEDL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRDAPAF-YELQYRGRELRFNLTANQ------HLLAPG---FVSETRRGGLGRAHI 121
                                                                  MCQPHRSCSINEDTGLPLAFTVAHELGHSFGIQHDGSGNDCEPV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.0%; Score 522.5; DB 4; nilarity 31.3%; Pred. No. 1.2e-41; Conservative 62; Mismatches 171;
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Satoshi
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RESULT 12
US-09-930-872-2
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US-09-930-872-4
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LENGTH: 1224
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PRIOR FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FASTERN
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APPLICANT: Hilbun, Erin
TITLE OF INVENTION: NO. 6448388el Human P.
FILE REFERENCE: LEX-0219-USA
CURRENT APPLICATION NUMBER: US/09/930,872
CURRENT FILING DATE: 2001-08-14
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                                                                                    451 KKSEGN-----IMSPTLAGRNGVFSWSPCSRQYLHKFLSTAQAICLADQPK 496
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                                                                                                                                                                                                LCG--HHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHD-DSKFC
                                                                                                                                                                                                                                                                                                HIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTRED 369
                                                                                                                                                                                                                                                                                                                                            --RHKRSLLRSHRNEELNVETLVVVDKKMMQNHGHENITTYVLTILNMVSALFKDGTIGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGFVPAGGG-----TSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHAR 162
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                                                                                                                              EETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPR 477
                                                                                                                                                                        ICSWKNEPCDTLGFAPISGMCSKYRSCTINEDTGLGLAFTIAHESGHNFGMIHDGEGNMC
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Sequence 2, Application US/09930872
Patent No. 6448388
GENERAL INFORMATION:
APPLICANT: Friddle, Carl Johan
APPLICANT: Hilbun, Erin
TITLE OF INVENTION: No. 6448388e1

REFERENCE:

ION: NO. 6448 LEX-0219-USA

6448388el Human

Proteases and

Polynucleotides Encoding

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; ORGANISM: homo sapiens
US-09-930-872-2
                                                                                                                                                                                                                                                                                                                                                     US-09-369-364A-5
                                                      SEQ ID NO 5
LENGTH: 859
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 2
                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09369364A Patent No. 6391610
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Best Local :
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                                                                                                                                                    APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/930,872
CURRENT FILING DATE: 2001-08-14
PRIOR APPLICATION NUMBER: US 60/225,852
                                                                                                                                                                                                                                                     APPLICANT: Apte, Suneel APPLICANT: Hurskainen,
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NUMBER OF SEQ ID NOS: 5
                                                                                                               SOFTWARE:
                                                                                                                                  NUMBER OF SEQ ID NOS:
                                    ORGANISM: Homo sapiens ADAMTS-6
                    FEATURE:
NAME/KEY: MOD_RES
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                                                                                                                                                                                                                                                                                                                                                                                                                                  KKSEGN----IMSPTLAGRNGVFSWSPCSRQYLHKFL 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LCG--HHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHD-DSKFC 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NINIAIVGLILLEDEQPGLVISHHADHTLSSFCQW--QSGLMGKDGTRH-DHAILLTGLD 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTRED 369
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAHQPLHSSDL-RLGLPQKQHFCGRRKKYMPQPPKEDLFILPDEYKSCL-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YTLKPLLRGP----WAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEA 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PGFIVQTLGKTGTKSVQTLPP---EDFCFYQGSLRSHRNSSVALSTCQGLSGMIRTEEAD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGFVPAGGG-----TSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHAR 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DHRGDYVSHEIMHHQRRRRAVAVSEVESL-----HLRLKGSRHDFHVDLRTSSSLVA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QERAEPPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRR-FLLDLERDGSVGI 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WMLLAQVAEQAPACAMGPAAAAPGSPSVPRPP-----PPAERPGWMEKGEYDLVSAYEV 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFL 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ICSWKNEPCDTLGFAPISGMCSKYRSCTINEDTGLGLAFTIAHESGHNFGMIHDGEGNMC
                                                                                                                 PatentIn Ver.
                                                                                                                                                                                                                                                     Hurskainen, Tiina L.
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Pred. No. 2.8e-34;
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; LOCATION: (450)
; OTHER INFORMATION: Xaa -
US-09-369-364A-5
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Patent No.
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
COMPUTER: IBM Compat
                                              ATTORNEY/AGENT INFORMATION:
NAME: Abrams, Samuel B
REGISTRATION NUMBER: 30,
                                                                                                                                  CLASSIFICATION: PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
NAME: Abrams, Samuel B
REGISTRATION NUMBER: 30,605
REGISTROPORET NUMBER: 83
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-493-4935
                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                             CITY: New York
STATE: NY
                                                                                                     FILING DATE:
                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIP: 10036-2811
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                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                               STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AP-WRH--RSHCFYRGTV-DGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEE 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AORRRSKGLV---ONIDOLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFVPAGGGTS 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LKNFCKWQ-----HOH--NQLGDDHEEHYDAAILFTREDLCGHHS--CDTLGMADVGTIC 388
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5. 6428998
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1155 Avenue
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Prockop, Darwin J.
VENTION: RECOMBINANT N-PROTEINASE,.
VENTION: AND THE PRODUCTION, METHODS
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                                                                                                                                                                                                                                                       IBM Compatible
                                                                                                                                                                                                                                                                         Diskette
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                                 8389-0060-999
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Pred. No. 3.9e-31;
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; SOFTWARE: Patent
; SEQ ID NO 17
; LENGTH: 1081
; TYPE: PRT
; ORGANISM: Homo s
US-09-369-364A-17
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                                                                                                                                                                                                                                                                                                                                                        Sequence 17, Application US/09369364A Patent No. 6391610
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Best Local Similarity 28.2%;
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  Query Match
Best Local Similarity
                                                                                                                                                                                           APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirchata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILLING DATE: 1999-08-06
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TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                             NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                   APPLICANT:
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STRANDEDNESS: single
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AVKHARYTLKPLLRGPWAEE-EKGRVYGDGSARILHVYTREGF----SFEALPPRASCET 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PASTPEAHEHAPAHSNPSGRAALASQLLDQSALSPAGGSGPQTWWRRRRRSISRARQVEL 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VGIAGFVPAGGGTSAPWRHRS------HCFYRGTVDGSPRSLAV-FDLCGGLDGFF 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VVSAATAPAGVRTRRAAPAQIPGL----SGGSEEDPGGRLFYNYTVFGRDLHLRLRFNAR 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RAEPPGHPHPLAQRRRSKGLVQNIDQLYSG-----GGKVGYLVYAGGRRFLLDLERDGS 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PERSCAVIEDDGLHAAFTVAHEIGHLLGLSHD-DSKFC--EETFGSTEDKRLMSSILTSI 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RMEEEEFFIEPLEKGLAAKEAEQGRVH-----VVYHRFTTSRFFFLGGFQALDTGISADS 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAGRILCPALLLLLLPLPADARLAAAAADPPGGPQGHGAERILAVPVRTDAQGRIVSH 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICS 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLVADASMARLYG-RGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLG-DKDKSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PVRSCTLNHEDGFSSAFVVAHETGHVLGMEHDGQGNRCGDEVRLGS-----IMAPLVQAA 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EIGNPSQSLENVCRWAYLQQKPDTDHDEYHDHAIFLTRQDF---GPSGMQGYAPVTGMCH 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLGVDDSVVQFHGTEHVQKYLLTLMNIVNEIYHDESLGAHINVVLVRIILLSYGKSMSLI 324
                                                                                                                                                            PatentIn Ver.
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  14.8%;
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Pred. No. 2.5e-30;
Score 388; DB 4;
Pred. No. 1.5e-28;
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                    Length 1081;
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413 CNRDYITSFLDSGLGLCLNNRPPRQDFVYPTVAPGQAYDADEQ 455
                                      455 CTSATITEFLDDGHGNCLLDLPRKQ-----ILGGDYKDDDDK 491
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                                                                                                                                                                 298 SIVNHSGHGNAIPENGVANHDTAVLITRYDICIYKNKPCGTLGLARWAECVSAREAAASM
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                                                                                                                                                                                                   -----QHNQLGDDHEEHYDAAILFTREDLCGHHS--CDTLGMADVGTICSPERSCAVI 397
                                                                                                                                                                                                                                                                                                                                                                       LYSGGGKVGYLVYAG--GRRFLLDLERDGSVGIAGFVPAGGGT--SAPWRH--RSHCFYR 133
                                                                                                                                                                                                                                                                                                                                                                                                                  RHPHLDTACG------VRDEKPWKGRP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTVDGSPRSLAV-FDLCGGLDGFFAVKHARYTLKPLLRGP---WAEEEKGR--VYGDGSA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RHGGHSRVPPLLQSGLASTHFLLNLTRSSRL-LAGRVSVEYWTREGLAWQRAARPHCLYA 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TPSGLKMSSCPVWRAMRSP-----SPPAWTTTGHCWP-----SRHLLPGAAP 44
                                                                               R---TLAATSVHHCHEIGHTFGMNHDGVGNSCGAR---GQDPAKLMAAHITMKTNPFVWSS 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPAQDKAGQPPTAAAAAQPRRRQGEEVQERAEPP-----GHPHPLAQRRRSKGLVQNIDQ 79
                                                                                                                      EDDGLHAAFTV--AHEIGHLLGLSHDD-SKFCEETFGSTEDKRLMSSILTSIDASKPWSK 454
                                                                                                                                                                                                                                                                                                                                -----WWLRTLKPPPARPLGNETERGQPGLKRSVSRERYVETMDVADKMMVAYHGRRD
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Search completed: April 21, 2003, 14:49:18
Job time: 25.4345 secs

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Database
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Perfect score:
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2614
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1840.034 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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No.	Score	Match Length DB	ength	BB	ID	Description
1	2549	97.5	930	20	AAW75426	Human aggrecan deg
2	2335.5	89.3	929	21	AAB41226	Human ORFX ORF990
ω	2085.5	79.8	870	21	AAB21252	Rat metalloprotein
4	2077	79.5	930	22	AAB72280	Murine ADAMTS-5 am
տ	836.5	32.0	967	20	AAY04142	Human Tango-71 pro
σ	829.5	31.7	950	20	AAY49501	Human METH1 protei
7	829.5	31.7	950	22	AAB73549	Human ADAM-type me
8	829.5	31.7	950	22	AAB50002	Human METH1. Homo
9	829.5	31.7	967	19	AAW80285	Human integrin lig
10	829.5	31.7	968	22	AAB50011	Protein; SEQ ID 12

Arner EC, Pratta M,

Burn TC, Cc Solomon KA,

Copeland RA, Deci KA, Tortorella MD,

MD, Trzaskos JM, Yang

Magolda R;

WPI; 1999-142943/12.

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
6	567.5	75	76	7	586	619	Ω.	634.5	35	39.	640	644	646	646	646	657.5	657.5	657.5	658.5	658.5	658.5	722.5	732.5	752.5	755.5	755.5	770.5	770.5	770.5	\circ	\vdash	4	814	823
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AAB72286	AAB72285	AAE22542	AAM48394	AAB21261	AAU77133	AAU72897	ABG30702	AAE19173	AAB72301	AAB21251	AAB21264	ABG30703	AAU72896	AA014448	AAB86950	AAB66178	AAU29199	AAY99429	AAB21256	AAG78228	AAW75425	AAW78435	AAB72284	AAB74946	AAB50003	AAY49502	AAU74751	AAE22541	AAG62299	AAU72899	AAB21257	AAY53899	AAW78189	AAB21265
ADAMTS-9	ADAMTS-8 a	Human protease #3.	Rat aggrecanase.			Human metalloprote	Human aggrecanase	Human protease, PR	ADAMTS-9				metallopro	Human ADAMTS-SI pr	Human metalloprote	Protein of the inv	Human PRO polypept		Human metalloprote	Human aggrecanase-		~	Murine ADAMTS-8 am	ADAM typ	Human METH2, Homo	METH2 pro			Human metalloprote	Human metalloprote	Rat metalloprotein	Amino acid sequenc	Human secreted pro	Mouse metalloprote

ALIGNMENTS

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RESULT 1
AAW75426
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                                                                                                                                                                    16-OCT-1997;
25-JUL-1997;
15-AUG-1997;
                                                                                                                                                                                                                        Human; aggrecan degrading metalloprotease; cartilage; proteoglycan; interglobular domain; matrix metalloprotease; bovine; interleukin-lbeta; primer; PCR; amplification; inhibitor; cleavage; inhibitor; ADMP;
                                                                                                                                                                                                                                                                                                                                                                             AAW75426 standard; Protein; 930 AA.
                                                                                                                     04-FEB-1999
                                                                                                                                                                                                                                                                                     Human aggrecan degrading metalloprotease 2
                                                                                                                                                                                                                                                                                                                 30-MAR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                  AAW75426;
                                                                                                                                                    WO9905291-A2.
                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                             arthritis; joint injury; pseudogout.
(DUPO ) DU PONT PHARM CO.
                                                                                         24-JUL-1998;
                             97US-0062169.
97US-0053850.
97US-0055836.
                                                                                         98WO-US15438
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RESULT 2
AAB41226
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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                                                                                                                                                                                             AAILFTREDLCGHHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSH
                                                                                                                                                                                                                                                                                                          VYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQLLD 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFVPAGGGT 120
                                                                                                                                       DDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQI
                                                                                                                                                     DDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQI
                                                                                                                                                                                                                                                   LYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYD 360
                                                                                                                                                                                                                                                                                                                                                                                                                      sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGR 180
                                                                                                                                                                                                                                                                                                                                                                 VYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQLLD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 68-70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                930
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99.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 2549; DB 20;
Pred. No. 4.2e-221;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
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AAB41226

standard; Protein;

Query Match Best Local

Similarity

89.3%; 91.6%;

Score Pred.

2335.5; DB 2 No. 8.4e-202;

21;

Length

929;

Sequence

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CC AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, CC which represent the human ORFX open reading frames 1 to 3161 The ORFX CC sequences have activities such as: cytostatic; hepatotropic; vulnerary; CC antipsoriatic; antiparkinsonian; nootropic; neuroprotective; CC antipsoriatic; antiporvulsant; intrarthritic; immunosuppressant; CC immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; CC antidiabetic; hygotensive; dermatological; immunosuppressive; CC antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic; CC antithyroid; and antianaemic. The sequences can be used for determining CC the presence of or predisposition to, or preventing or treating CC pathological conditions associated with an ORFX-associated disorder. The couleic acids can be used to express ORFX proteins in gene therapy CC vectors. The proteins and nucleic acids may be used to treat cancers, CC proliferative disorders, neurodegenerative disorders, osteoarthritis, CC proliferative disorders, neurodegenerative disorders, osteoarthritis, CC graft vs host disease, cardiovascular disease, diabetes mellitus, CC proliferation, hypothyroidism, cholesterol ester storage, systemic lupus CC crythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autolmmune disorders, asthma, CC latergies, aplastic anaemia, burns, wonnds, bone and cartilage damage, coccupiantion; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-1999;
02-APR-1999;
05-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypotensive; dermatological; immunosuppressive; antiinflammatory; antiviral; antibacterial; antifungal; antirheumatic; antithyroid; antitanaemic; gene therapy; cancer; prolliferative disorder; hypertension; neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinurla; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 11; Page 1497-1500; 5507pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel nucleic acids and peptides derived from open reading useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB;
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DB; AAC75435.
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99US-0127636.
99US-0127728.
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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB21252 standard;
                                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                 autoimmune disease; brain tumour; brain injury.
                                                                                           08-MAR-2000; 2000WO-US06237
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                              (NEUR-) NEUROCRINE BIOSCIENCES
                                                            ÓВ-MAR-1999;
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                                                                                                                                                                                                                                                                                                                                                               ADAMTS-4;
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Best Local Sim
Matches 410;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     metalloproteinase and thrombospondin domain protein family us prevent and treat Alzheimer's disease, cancer and autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 12; Fig 4; 129pp; English.
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              AAB72280;
                                             AAB72280 standard;
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                                                                                                                                                                                                                                             SQLLDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRGLQHYLLTLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAE 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MLLGWAS-----LLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEVQERA
                                                                                                                                                     PRKQILG
                                                                                                                                                                                                    LGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDL
                                                                                                                                                                                                                                                                                                            EEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EPPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFVP 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {\tt MRLEWASLLLLLLLCASCLALAADNPAAAPAQDKTRQPRAAAAAAQPDQRQWEETQER-}
                                                                                                                        PRKQILG
                                                                                                                                                                                      LGLSHDDSKFCEENFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDV
                                                                                                                                                                                                                                                                                                                                          SIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDH
                                                                                                                                                                                                                                                                                                                                                                          PQLLDHSAFSPAGNAGPQTWWRRRRRSISRARQVELLLVADSSMAKMYGRGLQHYLLTLA
                                                                                                                                                                                                                                                                                                                                                                                                                                        SE--RVYGDGSSRILHVYTREGFSFEALPPRTSCETPASPSGAQESPSVHSSSRRRTELA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAGGLSASSGHRGHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLRPLLRGSWAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---GHLQPLARQRRSSGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDDTVGAAGGIV 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       870
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                                                                                                                          479
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                                           Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13;
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Pred. No. 3e-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.5;
. 3e-179;
. 51;
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Best Local Sim
Matches 409;
                                                                                                                                                                                                                                                                                                                                                                  with inappropriate ADAMTS-N expression. Disorders that may be treated using the nucleic acids, proteins and antibodies include, for example tumour cachexia, inflammation, dermatosparaxis in cattle or Ehlers-Danlos syndrome type VIIC (EDS-VIIC) in humans, erosion of articular cartilage in arthritic (both inflammatory and non-inflammatory) disease, and they may also be used for controlling embryogenesis and implantation of fertilised eggs. The present sequence represents murine ADAMTS-5. The murine ADAMTS-5 gene is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention relates to murine and human ADAMTS-N (A disintegrin-like and metalloprotease domain with thrombospondin type I motifs) proteins, designated ADAMTS-5, 6, 7, 8, 9, 10 and RI. Also included in the invention are cDNA sequences encoding the proteins, and antibodies specific for the proteins. The nucleic acid sequences and proteins may be used in the prevention, diagnosis and treatment of diseases associated used in the prevention, diagnosis and treatment of diseases associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murine and human 'A Disintegrin-like And Metalloprotease domain with ThromboSpondin type I motifs' proteins and the nucleic acids encoding them, useful for treating e.g. tumours, inflammation and arthritis -
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                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200111074-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CLEY-) CLEVELAND CLINIC FOUND (APTE/) APTE S S. (HURS/) HURSKAINEN T L. (HIRO/) HIROHATA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-AUG-1999;
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                                                            MLLGWAS-----LLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAAQPRRRQGEEVQERA 55
                                                                                                                                               EPPGHPHPLAQRRRSKGLYQNIDQLYSGGGKVGYLYYAGGRRFLLDLERDGSVGIAG-FV 114
EYE--RIYGDGSSRILHVINREGFSFEALPPRASCETPASPSGPQESPSVHSRSRRRSAL
                                EEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAAL
                                                                                                                                                                                             MRLEWASLLLLLLLSASCLSLAADSPAAAPAQDKTRQPQAAAAAAEPDQPQGEETRER-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-159978/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADAMTS-5
                                                                                                                              -GHLQPLAGQRRSGGLVHNIDQLYSGGGKVGYLVYAGGRRFLLDLERDDTVGAAGSIV
                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF63437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fig 1; 181pp; English
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                                                                                                                                                                                                                                                                                                                          930
                                                                                                                                                                                                                                                                                                                                                          chromosome
                                                                                                                                                                                                                                                             Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                          79.5%; Score 2077; I
83.8%; Pred. No. 1.90
Live 14; Mismatches
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.9e-178;
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                                                                                                                                                                                                                                                                                        930;
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                                                                                                                                                                                                                                                          Gaps
234
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Similarity

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RESULT 5
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  Query Match
Best Local
                                                               The present sequence represents human Tango-71. Tango polypeptides are useful for identifying compounds which bind the polypeptide via direct binding, competition binding assays or Tango-71, -73, -74, 76 or -83 mediated signal transduction. Tango polypeptides are also useful for identifying modulating compounds by determining effect on Tango activity. Tango polypeptides and nucleic acids are useful for diagnosing diseases related to aberrant expression of Tango, and Tango polypeptides are useful for raising antibodies which can be used in diagnostic assays for detection of Tango, and also for generating anti-idiotype antibodies for reconsticution of Tango, and also for generating anti-idiotype antibodies for
                                  Sequence
                                                                                                                                                                                Claim 8; Fig 1; 84pp; English.
                                                                                                                                                                                                      New TANGO polypeptides and nucleic acids encoding them -
diagnostic agents and for treating disorders caused by al
expression of TANGO
                                                                                                                                                                                                                                                                                                                                05-SEP-1997;
06-AUG-1997;
                                                        prevention
                                                                                                                                                                                                                                                  N-PSDB; AAX19955
                                                                                                                                                                                                                                                                                    Goodearl ADJ,
                                                                                                                                                                                                                                                                                                                                                                  06-AUG-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human Tango-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY04142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY04142 standard;
                                                                                                                                                                                                                                                                                                         (MILL-) MILLENNIUM BIOTHERAPEUTICS INC
                                                                                                                                                                                                                                                                                                                                                                                       18-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                          detection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; Tango-71;
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                                                        and
                               967 AA;
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                                                        protection.
                                                                                                                                                                                                                                                                                    Holtzman
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97US-0054966
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                                                                                                                                                                                                                                                                                                                                                                  98WO-US16502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tango-73; Tango-74; Tango-76; Tango-83; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
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Pred.
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WPI; 1999-590684/50

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RESULT 6
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                                                     (IRUE/)
                                                                                                                                                                                                                                                           Human; METH1; METH2; anti-angiogenic; metalloprotease thrombospondin; cancer; diagnosis; hyperproliferative disorder; autoimmune disease; angiogenesis inhibitor; abnormal wound healing; inflammation; rheumatoid arthritis; psoriasis; endometrial bleeding disorder;
                                                                                          23-JAN-1998;
28-AUG-1998;
                                                                                                                                22-JAN-1999;
                                                                                                                                                          29-JUL-1999.
                                                                                                                                                                                    WO9937660-A1
                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                     arterial-venous malformation; immune deficiency.
                                                                                                                                                                                                                                                   diabetic retinopathy;
                                                                                                                                                                                                                                                                                                                              Human METH1 protein
                                                                                                                                                                                                                                                                                                                                                          10-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                            AAY49501 standard; Protein;
               Iruela-Arispe L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      453
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSK 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RAALASQLLDQSALSPAGGSGPQTWWR-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AHCFYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPL---PAASER-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VONIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFV-----PAGGGTSAPWRHR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPCSAYMITSFLDNGHGECLMDKPQNPIQLPGD 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPW 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAALTLRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDLCGSQTCDTLGMADVGTVCDPSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAQDKAGQPPT----AAAAAQPRRRQGEEVQERAEP----PGHPHPLAQRRRSKGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPW 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195;
                                      IRUELA-ARISPE L.
HASTINGS G A.
RUBEN S M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                          98US-0072298
98US-0098539
                                                                                                                                99WO-US01313
               Hastings GA,
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                                                                                                                                                                                                                                               macula degeneration; haemangioma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54; Mismatches 149;
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               Ruben
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                                                                                                                                                                                                                                                  detection
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RESULT 7
AAB73549
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wound healing, inflammation, rheumatoid arthritis, psoriasis, endometrial bleeding disorders, diabetic retinopathy, some forms of macula degeneration, haemangiomas, and arterial-venous malformations. They may be useful in treating deficiencies or disorders of the immune system, by activating or inhibiting the proliferation, differentiation, or mobilisation (chemotaxis) of immune cells. The etiology of these immune deficiencies or disorders may be genetic, somatic, such as cancer or some autoimmune disorders, acquired (e.g. by chemotherapy or toxins), or infectious. They can also be used to treat inflammatory conditions, both chronic and acute conditions. The products can also be used for detection and diagnosis. AAX32002 to AAX32080, and AAX49503 to AAX49511 represent sequences given in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                          AAZ32000 and AAZ32001 encode, and AAY49501 and AAY49502 represent, human metalloprotease thrombospondin (METH) proteins METH1 and METH2 respectively. METH1 and METH2 have been found to be potent inhibitors of angiogenesis both in vitro and in vivo. They can be used for treating
                                                                                                                                                                                                                                                                                                                                                              cancer and other disorders related to angiogenesis including abnormal wound healing, inflammation, rheumatoid arthritis, psoriasis,
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 10; Fig 1; 457pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated metalloprotease thrombospondin polypeptides, useful for treating hyperproliferative disorders, cancers or autoimmune disorde
                                                   invention.
950 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
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                                                                      present
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밁 Best Loc Matches Query Match 427 307 151 188 453 247 273 193 104 65 74 VQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFV-----PAGGGTSAPWRHR 127 26 PAQDKAGQPPT-----AAAAAQPRRRQGEEVQERAEP----PGHPHPLAQRRRSKGL 73 æ Local NAALTLRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDLCGSQTCDTLGMADVGTVCDPSR LVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSK RAALASQLLDQSALSPAGGSGPQTWWR-------RRRRSISRARQVELL RILHVYTREGFSFEALPPRASCETPASTPEAH------EHAPAHSNPSG SHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSA 187 SPCSAYMITSFLDNGHGECLMDKPQNPIQLPGD 459 NAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPER AHCFYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPL---PAASER------DQQLD------LELRPDSSFLAPGFTLQNVGRKSGSETPLPETDL 103 SKCTSATITEFLDDGHGNCLLDLPRKQI-LGGD 484 SCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPW SCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPW LVADQSMAEFHGSGLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQKGPEVTS KA----ETEDEDEGTEGEDEGPQ--WSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETM -----LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEP---RPTG PGSRSFGPVPTLLLLAAALLAVSDALGRPSEEDEELVVPELERAPGHG---TTRLRLHAF 64 194; Similarity Conservative 31.7%; Score 829.5; DB 37.8%; Pred. No. 1.2e-65 54; Mismatches 150; DB 20; Indels 115; Length 950; Gaps 230 366 246 272 192 150 13;

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Best Local
                                                                                                                                                                                                                                                                                                                                                              Matches 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to the novel human ADAM (A Disintegrin and Metalloprotease) type metalloproteases MDTS4 (AAB73549) and MDTS5 (AAB73559). The metalloproteases can be used for the treatment of cancers and arthritis. The invention also relates to the genes encoding MDTS4 and MDTS5, vectors and host cells containing the MDTS4 or MDTS5 genes, the recombinant production of MDTS4 and MDTS5, and antibody specific for MDTS4 or MDTS5, and methods of screening for compounds which modulate the activity of MDTS4 and/or MDTS5. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A new metal protease and its preparation for use {\tt anti-arthritic} therapeutic -
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A Disintegrin
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NAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPER
                                                    LVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSK
                                                                                                                                                                                                                                                                               VONIDOLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFV-----PAGGGTSAPWRHR 127
                                                                                                                                                                                                                                                                                                                                    PAQDKAGQPPT-----AAAAAQPRRRQGEEVQERAEP-----PGHPHPLAQRRRSKGL
                                        LVADQSMAEFHGSGLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQKGPEVTS
                                                                                           KA----ETEDEDEGTEGEDEGPQ--WSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETM
                                                                                                                     RAALASQLLDQSALSPAGGSGPQTWWR-----
                                                                                                                                               -----LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEP---
                                                                                                                                                                        RILHVYTREGESFEALPPRASCETPASTPEAH------EHAPAHSNPSG
                                                                                                                                                                                                 AHCFYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPL---PAASER------
                                                                                                                                                                                                                            SHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSA 187
                                                                                                                                                                                                                                                        DQQLD-----
                                                                                                                                                                                                                                                                                                          PGSRSFGPVPTLLLLAAALLAVSDALGRPSEEDEELVVPELERAPGHG---TTRLRLHAF
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                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                  950
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Pred
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No. 1.2
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   Db
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The present sequence is human METH1 (ME for metalloprotease and TH for thrombospondin). METH1 can be used for inhibiting angiogenesis in an individual, and for treating cancer, benign tumours, an ocular angiogen
                                                  Claim
                                                                                                                                                                                                                                                                                        (HUMA-)
(SMIK)
(BETH-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Crohn's disease;
                                                                        METH1 and METH2 polynucleotides and einhibit angiogensis in the treatment rheumatoid arthritis and psoriasis
                                                                                                                                                                Iruela-Arispe
Fornwald JA,
                                                                                                                                                                                                                                                                                                                                                                             20-JUL-1999;
10-AUG-1999;
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DB; AAC90057.
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                                                 15; Fig 1; 768pp;
                                                                                                                                                                                                    TRULLI S H.
FORNWALD J A.
TERRETT J A.
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JONAK Z L.
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99US-0171503
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99US-0147823
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28-OCT-1998
                            EP874050-A2.
                                                      Homo sapiens
                                                                                  macular degeneration; restenosis.
                                                                                                           ITGL-TSP; integrin ligand; angiogenic disease; cancer; atherosclerosis;
chronic inflammatory disorder; rheumatoid arthritis; tissue remodeling;
                                                                                                                                                      Human integrin ligand polypeptide ITGL-TSP
                                                                                                                                                                                    19-JAN-1999
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                                                                                                                                                                                                                                                                                                                                                                     SCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPW
                                                                                                                                                                                                                                                                                                                                                                                     SCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKKLMSSILTSIDASKFW 452
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFV-----PAGGGTSAPWRHR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEP---RPTG
                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31.7%;
                                                                                                diabetic retinopathy; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----LELRPDSSFLAPGFTLQNVGRKSGSETPLPETDL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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hes 150;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----RRRRSISRARQVELL
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Best Local S
Matches 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This represents a human integrin ligand polypeptide ITGL-TSP. ITGL-TSP polypeptides can be used in the treatment of angiogenic diseases such a cancer, cancer metastasis, chronic inflammatory disorders, rheumatoid arthritis, atherosclerosis, macular degeneration or diabetic retinopati restenosis, Alzheimer's disease and tissue remodeling. They can be used to treat a subject in need of enhanced activity or expression of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA encoding integring angiogenic diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
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Trulli SH;
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(SMIK) SMITHKLINE BEECHAM CC
(SMIK) SMITHKLINE BEECHAM PI
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hes 194; Conserv
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                                                                                                     LVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSK
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                        SKCTSATITEFLDDGHGNCLLDLPRKQI-LGGD
                                                                 LVADQSMAEFHGSGLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQKGPEVTS
                                                                                                                                                                                                                KA - - -
                                                                                                                                                                                                                                       RAALASQLLDQSALSPAGGSGPQTWWR---------RRRRSISRARQVELL
                                                                                                                                                                                                                                                                  -------LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEP---RPTG
                                                                                                                                                                                                                                                                                                                    AHCFYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPL---PAASER-----
                                                                                                                                                                                                                                                                                                                                              SHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSA 187
                                                                                                                                                                                                                                                                                                                                                                          DQQLD---
SPCSAYMITSFLDNGHGECLMDKPQNPIQLPGD
                                                                                                                                                                                                                                                                                                                                                                                                                             PGSRSFGPVPTLLLLAAALLAVSDALGRPSEEDEELVVPELERAPGHG---TTRLRLHAF
                                                   SCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPW
                                                                                                                                                                                                              ETEDEDEGTEGEDEGPQ--WSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     967 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-0845496
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n ligand polypeptide ITGL-TSP - used restenosis, Alzheimer's disease and
                                                                                                                                                                                                                                                                                                                                                                        -----LELRPDSSFLAPGFTLQNVGRKSGSETPLPETDL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 829.5; DB 19;
Pred. No. 1.2e-65;
4; Mismatches 150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jonak
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 115;
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                                                                                                                                                                                                                                                                                           -- EHAPAHSNPSG
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AAB50011
ischaemic limb angiogenesis, Osler-Webber Syndrome, plaque neovascularisation, telangiectasia, haemophiliac joints, angiofibroma, fibromuscular dysplasia, wound granulation, Crohn's disease or atherosclerosis. METH can also be used in birth control. METH can also be used in diagnostic methods for the prognosis of cancer. The present sequence is a protein isolated in the present invention.
                                                                                                               vasculogenesis, granulations, hypertrophic scars, nonunion fractures, scleroderma, trachoma, vascular adhesions, myocardial angiogenesis, coronary collaterals, cerebral collaterals, arteriovenous malformations
                                                                                                                                                          metalloprotease and TH for thrombospondin; see AAB50002 and AAB50003). METH can be used for inhibiting angiogenesis in an individual, and for treating cancer, benign tumours, an ocular angiogenic disease, rheumatoid arthritis, psoriasis, delayed wound healing, endometriosis,
                                                                                                                                                                                                                                                     Claim 15;
                                                                                                                                                                                                                                                                               METH1 and METH2 polynucleotides and encoded polypeptides, used to inhibit angiogensis in the treatment of disorders such as cancer, rheumatoid arthritis and psoriasis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  plaque neovascularisation; telangiectasia; haemophiliac joint;
angiofibroma; fibromuscular dysplasia; wound granulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rheumatoid arthritis; psoriasis; wound healing; endometriosis; vasculogenesis; granulation; hypertrophic scar; nonunion fracture; scleroderma, trachoma; vascular adhesion; myocardial angiogenesis; coronary collateral; cerebral collateral; arteriovenous malformation; ischemic limb angiogenesis; Osler-Webber syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; SEQ
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Fornwald JA,
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10-AUG-1999;
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                                                                                                                                                                                                                        present invention relates to human METH1 and METH2 (ME for
                                                                                                                                                                                                                                                                                                                                           2001-025136/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METH1; metalloprotease; thrombospondin; anglogenesis inhibition; therapy; benign tumour; ocular anglogenic disease;
                                                                                                                                                                                                                                                                                                                                                                                                                              JONAK Z L.
TRULLI S H.
FORNWALD J A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMITHKLINE
                                                                                                                                                                                                                                                     Pages 759-763;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            990S-0318208.
990S-0147882.
990S-0147823.
990S-0373658.
990S-0171503.
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                                                                                                                                                                                                                                                                                                                                                                      Terrett
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KLINE BEECHAM CORP
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rett JA;
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                                                                                                                                                                                                                                                     768pp; English.
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Matches 194
                                                                                   08-MAR-2000;
                                                                                                                                    WO200053774-A2
                                                                                                                                                             Mus musculus.
                                                                                                                                                                                    autoimmune disease; brain tumour;
                                                                                                                                                                                                Alzheimer's disease;
                                                                                                                                                                                                             cerebroprotective; cytostatic; antiarthritic; immunosuppressive;
                                                                                                                                                                                                                       vaccine; nootropic; neuroprotective;
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                                                                                                                                                                                                                                                 Mouse; ADAMTS-1;
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                                                                                                                                                                                                                                                                                                                                                AAB21265 standard; Protein;
                                  (NEUR-) NEUROCRINE BIOSCIENCES
                                                           08-MAR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DQQLD---
                                                                                                                                                                                                                                                                                                                                                                                                             SPCSAYMITSFLDNGHGECLMDKPQNPIQLPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAALTLRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDLCGSQTCDTLGMADVGTVCDPSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAALASQLLDQSALSPAGGSGPQTWWR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AHCFYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPL---PAASER---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFV-----PAGGGTSAPWRHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAQDKAGQPPT-----AAAAAQPRRRQGEEVQERAEP----PGHPHPLAQRRRSKGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ------LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEP---RPTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGSRSFGPVPTLLLLAAALLAVSDALGRPSEEDEELVVPELERAPGHG----TTRLRLHAF
                                                                                                                                                                                                                                                                       metalloproteinase ADAMTS-1.
          GS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -ETEDEDEGTEGEDEGPQ-
          Clark M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                               (first entry)
                                                                                   2000WO-US06237
                                                                                                                                                                                                                                   and metalloproteinase domain; thrombospondin domain;
                                                           99US-0264585
                                                                                                                                                                                                                                                 metalloproteinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31.7%;
                                                                                                                                                                                               Parkinson's disease;
            Maki RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----LELRPDSSFLAPGFTLQNVGRKSGSETPLPETDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54;
                                                                                                                                                                                                                                                                                                                                                896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 829.5;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -WSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETM
                                                                                                                                                                                                                                                                                                                                                A
A
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                                                                                                                                                                                      brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 1.2e-65
                                                                                                                                                                                                                                                 ADAM;
                                                                                                                                                                                                                        antiparkinsonian;
                                                                                                                                                                                                                                                                                                                                                                                                                                    484
                                                                                                                                                                                    injury.
                                                                                                                                                                                                stroke; cancer; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRRRSISRARQVELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
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RESULT 12
AAW78189
ID AAW7
XX
AC AAW7
XX
DT 13-2
XX
DE Huma
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is mouse metalloproteinase ADAMTS-1. The ADAMTS family of proteins is closely related to the ADAM (A Disintegrin and Metalloproteinase Domain) family. Members of the ADAMTS family contain a thrombospondin domain in addition to the disintegrin and metalloproteinase Domains found in the ADAMS ADAMTS polypeptides are useful for the manufacture of medicaments for treating conditions associated with neuroinflammation and/or neurodegeneration, such as Alzheimer's disease, Parkinson's disease and stroke. They are also useful for treating conditions associated with cell proliferation, cell migration, inflammation and/or angiogenesis, such as cancer, arthritis and autoimmune diseases. They can be used to treat patients afflicted with an invasive tumour, a brain tumour or brain injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polynucleotide encoding novel members of a disintegrin, metalloproteinase and thrombospondin domain protein family used to prevent and treat Alzheimer's disease, cancer and autoimmune diseases
   Human secreted
                                   13-APR-1999
                                                                                                   AAW78189 standard; Protein; 967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure;
                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  151
                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                 386
                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                266
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MLLGWASLLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEV----QERAE 56
                                                                                                                                                                                                                                                                                                                                                                            LDHSQPWSPCSAYMVTSFLDNGHGECLMDKPQNPI 455
                                                                                                                                                                                                               IDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQI 480
                                                                                                                                                                                                                                                                  TICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTS
                                                                                                                                                                                                                                                                                                           LRGPWAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TVGRSPGSEAQHLDPTGDLAHCFYSGTVNGDPGSAAALSLCEGVRGAFYLQGEEFFTQP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGF---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MLL----LLLASITMLLCARGAHGRPTE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-594326/56
                                                                                                                                                                                                                                               TVCDPSRSCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKHCASLNGVTGDSHLMASMLSS
                                                                                                                                                                                                                                                                                                                                                                                                                                               RGSGGAKCGVMDDETL-PTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGRAALASQLLDQSALSPAGGSGPQT----WWR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -VPAGGGTSA----PWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPL 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fig 17; 129pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
protein encoded by gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----APGVATERLAPAVPEEESSARPQFH---ILRRRR 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 823; DB 21;
Pred. No. 4.1e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------LDAFGQQLHLKLQPDSGFLAPGFTLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
 64
   clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----- 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --EDEELVLPSLERA- 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                             385
                                                                                                                                                                                                                                                                                445
                                                                                                                                                                                                                                                                                                           360
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12-SEP-1997;
12-SEP-1997;
12-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS; cognitive disorder; schizophrenia; prostate; obesity; osteoclast; thymus; osteoporosis; arthritis; testis; lung; thyroiditis; thyroid; digestion;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference 45
                                                                                                                                                                                                                                                                       02-OCT-1997;
13-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   endocrine; metabolism; regulation; malabsorption;
                                                                                                                                                                                                                                                                                                           11-JUN-1998
                                                                                  12-SEP-1997
                                                                                                                                                                                   L3-JUN-1997
                                                                                                                                                                                                                                                          13-JUN-1997
         97US-0058971.
97US-0058972.
97US-0058975.
                                                                                                                                                                      97US-
                                                                                                                                                                                                                                                                                                           98WO-US12125
                                                                                97US-0058665
                                                                                                                                  97US-0050901.
                                                                                                                                                                                   97US-0049609
                                                                                                                                                                                                                      97US-0049606
                                                                                                                                                                                                                                                                                                                                                                                                                     /label= unknown
297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
97us-0060834
                                                                                                                                                                                                                                                                                                                                                                                                 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                293
                                                                                                                                                                                                                                                                                                                                                                                    /label= unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label= unknown
                                                                                                                                                                                                                                                                                                                                                                                                           /label≖ unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ′label≖ unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'label= unknown
                                                                                                                                                                      0049610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gastritis; neoplasm
```

New isolated human genes and the secreted polypeptides they encode useful for diagnosis and treatment of e.g. cancers, neurological disorders, immune diseases, inflammation or blood disorders

WPI; 1999-080881/07 N-PSDB; AAX04374.

(HUMA-) HUMAN GENOME SCI INC

PA, Z Ebner 'n

Olsen

Ferrie AM, HS,

Rosen

Feng P, Greene JM, n CA, Ruben SM, Shi

Lafleur DW; Y, Young P;

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RESULT 13
AAY53899
ID AAY53
XX
AC AAY53
XX
AC AAY53
XX
XX
DT 13-MA
XX
XX
XX
DE Amino
XX
KW GON-1
KW GON-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to 86 novel genes and their fragments (nucleic acid sequences: AAX04311-X04410; amino acid sequences AAW78126-W78225) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polypnucleotides. Specific uses are described for each of the 86 polynucleotides, based on which tissues they are most highly expressed in (see AAX04311 for described uses).
                        GON-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence represents a secreted human protein encoded by the clone detailed in the descriptor line. The gene can be used to g fusion proteins by linking to the gene to a human immunoglobulin portion (e.g. AAX04302) for increasing the stability of the fused protein as compared to the human protein only.
    metalloproteinase
                                                               Amino acid sequence of a murine ADAMTS-1 protein.
                                                                                                             13-MAR-2000
                                                                                                                                                                                              AAY53899 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                     471
                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                      411
                                                                                                                                                                                                                                                                                                                                                                                                                                420
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
hes 187; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IQLPGD 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DLERDGSVGIAGFV-----PAGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDG 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RQGEEVQERAEP-----PGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLL 100
                                                                                                                                                                                                                                                                                                                                           I-LGGD 484
                                                                                                                                                                                                                                                                                                                                                                                    HDDAKQCASLNGVNQDSHMMASMLSNLDHSQPWSPCSAYMITSFLDNGHGECLMDKPQNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PLOFHLLRRNRQGDVGGTCGVVDDEP · · · RPTGKA - - - ETEDEDEGTEGEDEGPQ · · WS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AFYLLGEAYFIQPL---PAASER------------LXTAAPGEKPPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ELRPDSSFLAPGFTLQNVGRKSGSETPLPETDLAHCFYSGTVNGDPSSAAALSLCEGVRG
                                                                                                                                                                                                                                                                                                                                                                                                                            HDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQ 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PODPALOGYGOPTGTGSIRKKRFYSSHRYYETMLYADQSMAEFHGSGLKHYLLTLFSVAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RPSEEDEELVVPELERAPGHG---TTRLRLHAFDQQLD------- 87
    metalloproteinase;
oproteinase domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page
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                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----EHAPAHSNPSGRAALASQLLDQSALSPAGGSGPQTWWR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
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                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31.1%;
cell migration; thrombospondin c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53; Mismatches 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 814; DB 2
Pred. No. 3e-64;
    domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 20;
                        modulator; ADAMTS-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 967
  abnormal cell migration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               108;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cc metalloprotease, a C. elegans GON-1 protein, that lacks a transmembrane cc 269-456. In C. elegans hermaphrodites, GON-1 is required for migration of cc two distal tip cells to produce elongated tubes, whereas in males, GON-1 is required for migration of cc is required for migration of a single linker cell to produce a single cc elongated tube. The protein is used in the method of the invention. The cc specification describes a method for identifying a modulator of a cc protein that contains a metalloproteinase domain and a thrombospondin cc domain. The method comprises treating a target organism, having a cdeveloping gonadal cell that is responsive to the protein, with a test compound, and determining any change in migration or shape of the cell contential therapeutic modulators of abnormal cell migration and organ contential therapeutic modulators of abnormal cell migration and organ contential therapeutic modulators of abnormal cell migration and cream contential therapeutic modulators of abnormal cell migration and cream contential therapeutic modulators of abnormal cell migration and cream contential therapeutic modulators of abnormal cell migration and cream contential therapeutic modulators of abnormal cell migration and cream cell contential therapeutic modulators of abnormal cell migration and contential cell migration and contential therapeutic modulators of abnormal cell migration and contential cell migration and contential cell migration and cell migration cell migration cell cell migra
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying modulators of proteins containing metalloprotease and thrombospondin domains, potentially useful for controlling cell
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13-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cal Similarity
190; Concern
PRYVETMLVADQSMADFHGSGLKHYLLTLFSVAARFYKHPSIRNSISLVVVKILVIYEEQ
                           ARQVELLLVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKD
                                                                                                                                                      SGRAALASQLLDQSALSPAGGSGPQT-----WWR----
                                                                                                                                                                                                                                                        LRGPWAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNP
                                                                                                                                                                                                                                                                                                              TVGRSPGSEAQHLDPTGDLAHCFYSGTVNGDPGSAAALSLCEGVRGAFYLQGEEFFIQP-
                                                                                                                                                                                                                                                                                                                                             -VPAGGGTSA----PWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPL 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLL----LLLASITMLLCARGAHGRPTE--
                                                                                                    RGSGGAKCGVMDDETL-PTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSS
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99US-0129023.
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    Best Local Sig
Matches 166;
                                                                                Query Match
                                                                                                                                                                                                                                                                      The present sequence is rat metalloproteinase ADAMTS-5. The ADAMTS family of proteins is closely related to the ADAMT family and Metalloproteinase Domain) family. Members of the ADAMTS family contain a thrombospondin domain in addition to the disintegrin and metalloproteinase domains found in the ADAMS. ADAMTS polypeptides are useful for the manufacture of medicaments for treating conditions associated with neuroinflammation and/or neurodegeneration, such as Alzheimer's disease, Parkinson's disease and stroke. They are also useful for treating conditions associated with solitons associated with seating conditions associated with seating conditions associated with seating conditions associated with cell proliferation, cell migration, inflammation and/or angiogenesis, such as cancer, arthritis and autoimmune diseases. They can be used to treat patients afflicted with an invasity of the property of the property of the province of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a disintegrin and metalloproteinase domain; thrombospondin domain; vaccine; nootropic; neuroprotective; antiparkinsonian; cerebroprotective; cytostatic; antiparkinic; immunosuppressive; Alzheimer's disease; Parkinson's disease; stroke; cancer; arthritiantimmune disease; brain tumour; brain injury.
                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polynucleotide encoding novel members of a disintegrin, metalloproteinase and thrombospondin domain protein family used prevent and treat Alzheimer's disease, cancer and autoimmune dis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-MAR-1999;
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                                                                                                                                                                                                                                            an invasive tumour, a brain tumour or brain injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTS 445
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        Conservative
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                                          29.5%;
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                                          Score 771.5;
Pred. No. 8.
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    49;
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Claim 28;

Figure

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                                     Novel protease polypeptide useful for screening for substances that may be used to treat, e.g., cancers, immune-related diseases, cardiovascular disease, migraine, pain, psychotic and inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human metalloprotease partial protein sequence #11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU72899 standard;
                                                                                                                                                                                                                                                                                                                                                          cognition disorder; hypotension; hypertension; psychot dyskinesia; metabolic disorder; inflammatory disorder.
                                                                                                                                                                                                                                                                                                                                                                                        migraine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; protease; PCR primer; cytostatic;
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                                                                                                  N-PSDB;
                                                                                                                                         Plowman GD,
Payne V;
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                                                                                                                                                                                                                                             04-MAY-2001; 2001WO-US14431
                                                                                                                                                                                                                                                                        08-NOV-2001.
                                                                                                                                                                                                                                                                                                                                                                         immune-related disease; cardiovascular disease; neuronal disease;
migraine; sexual dysfunction; mood disorder; attention disorder;
cognition disorder; hypotension; hypertension; psychotic disorder;
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                                                                                                                                                                                   (SUGE-) SUGEN INC
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The invention relates to an isolated, enriched, or purified protease to polypeptide (I) and polynucleotide (II) encoding (I). (I) may be used to screen for substances (5) that may modulate its activity. Administering (S) (which modulates protease activity in vitro) may be used to treat a client of the control of the breast, colon, lung, prostrate, cervical, brain, ovarian, bladder or kidney), immune-related diseases and disorders, cardiovascular disease, brain or neuronal-associated diseases (e.g., central or peripheral nervous system diseases, migraine, pain, sexual dysfunction, mood disorders, attention disorders, neurological disorders, hypotension, hypertension, psychotic disorders, neurological disorders and dyskinesias), metabolic disorders and inflammatory also be useful as a diagnostic tool for a disease or disorders such as those above. AAU72876-AAU72910 represent human
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Query Match
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DOMAIN
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METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00090; tsp_1; 1.
Pfam; PF01421; Reprolysin; 1.
SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; M12.221; -. Genew; HGNC:220; ADAMTS4. MIM; 603876; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -I- DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
-I- PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE.
-I- SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
-I- SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
-I- SIMILARITY: CONTAINS 1 TSP TYPE-1 DOMAIN.
-I- CAUTION: HAS SOMETIMES BEEN REFERRED TO AS ADAMTS2.
                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Extracellular matrix SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; P550092; TSP1; 1.

PROSITE; P500427; DISINTEGRIN_1; FALSE_NEG.

PROSITE; P500427; DISINTEGRIN_1; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AB014588;
EMBL; AF148213;
                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                              DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROPEP
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InterPro: IPR001890; Reprolysin.
InterPro: IPR000884; Tsgl.
InterPro: IPR0000130; Zn_MTpeptdse
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     62
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TISSUE SPECIFICITY: EXPRESSED IN E
AT VERY LOW LEVEL IN PLACENTA AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              site.
COFACTOR: BINDS 1 ZINC
SUBCELLULAR LOCATION: S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INDUCTION: BY INTERLEUKIN-1
MSQTGSHPGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLASLLPSARLASPLPREEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF148213;
AY044847;
                                                                        MSQTGSHPGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLLASLLPSARLASPLPREEE
                                                                                                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PS00142; ZINC_PROTEASE; PS50215; ADAM_MEPRO; 1.
                                                                                                                                                                                                                                                                          Conservative
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682 G
90224 MW;
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212
212
837
194
361
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SPACER.
SPACER.
POLY-ALA
N-LINKED (GLCNAC. . .) (POT
A -> T (IN REF. 3).
R -> Q (IN REF. 3).
G -> R (IN REF. 3).
WW; 5DF9C9AC137DF41F CRC64;
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ZINC (CATALYTIC) (
ZINC (CATALYTIC) (
DISINTEGRIN-LIKE.
                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                  CYSTEINE SWITCH (
ZINC (CATALYTIC)
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                 TSP TYPE-1.
                                                                                                                                                 Mismatches
                                                                                                                                                                2313;
No. 6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (See http://www.isb-sib.ch/announce/
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5.9e-162;
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TAL MUSCLES.
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(BY
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                                                                                                                                                                                                                                                                                                       Neurosci. Lett. 289:177-180(zuvu).
-i- FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, INVOLVED IN ITS TURNOVER, MAY PLAY AN IMPORTANT ROLE DESTRUCTION OF AGGRECAN IN ARTHRITIC DISEASES.
-i- CATALYTIC ACTIVITY: Cleaves aggrecan at the 392-Glu-
           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sb.ch/announce/or send an email to license@isb-sb.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-4 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 4) (ADAM-TS 4) (ADAM-TS4) (Aggrecanase 1)
                                                                                                                                                                                                                                                                                                                                                                                                    motifs) is transcriptionally induced
astrocytes.";
                                                                                                                                                                                                                                                                                                                                                                                                       Satoh K., Suzuki N., Yokota n.; "ADAMTS-4 (a disintegrin and metalloproteinase with thrombospondin motifs) is transcriptionally induced in beta-amyloid treated rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-Wistar; TISSUE-Brain; MEDLINE-20415831; PubMed-10961658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RAT
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                                                                                                                                    TISSUE SPECIFICITY: ONLY EXPRESSED IN BRAIN.
TISSUE SPECIFICITY: ONLY EXPRESSED IN BRAIN.
DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS AR
FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE.
SIMILARITY: BELONGS TO PERTIDASE FAMILY MIZB.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 1 TSP TYPE-1 DOMAIN.
                                                                                                                                                                                                                                                               site.

COFACTOR: BINDS 1 ZINC

SUBCELLULAR LOCATION:
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DOMAIN AND THE TSP TYPE-1 DOMAINS ARE
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ADAMTS-1

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Best Local
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                                                                                                                      P97857; O54768;
30-MAY-2000 (Rel
16-OCT-2001 (Rel
                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
SEQUENCE
                                                                                     97857; US4/UU,
30-MAY-2000 (Rel. 39, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-1 precursor (EC 3.4.24.-) (A disintegrin
                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
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PROSITE; PS50092; TSP1; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                           MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Extracellular
NON_TER
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 Kuno
The
                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
                STRAIN=129/SvJ;
MEDLINE=98110583; PubMed=9441751;
                                                                              Mus musculus
                                                                                                                                                  ATS1_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
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                                                    NCBI_TaxID=10090;
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                                    SEQUENCE
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                                                                                                                                                                                                                                                                                                                                           Local
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                                                                                                                                                                                                                            RHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEAPLHLPVTGDYKDDD
                                                                                                                                                                                                                                                               RLVILGSGQEVPQVGPSAAQTLRSECTMQKGLNPPNDSDPDHFDTAILFTRQDLCGVSTC
                                                                                                                                                                                                                                                                                                 RTKRFASLSRFVETLVVADDKMAAFHGAGLKHYLLTVMAAAAKAFKHPSIRNPVNLVVT
 K., Lizasa H.,
exon/intron or
                                                                                                                                                                                           RHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEAPLHLPVTFPGKDYD
                                                                                                                                                                                                                                                                        RLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AB042272;
AB042271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AB042273;
                                                                                                                                                                                                                                                                                                                                    l Similarity
217; Conserv
                                 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; IPR001762; Disin; IPR001590; Repro; IPR000884; TSP1.; IPR000130; Zn_MT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metalloprotease;
                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                              (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     matrix.
                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                  STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BAB16473.1;
H., Ohno S., Matsushima K.;
organization and chromosom
                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                            48.3%;
91.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disintegrin.
                                                                                                                                                                                                                                                                                                                                                                      WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zinc;
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                                                                                                                                                                                                                                                                                                                                                               POLY-ALA.

N-LINKED (GLCNAC. ..) (POTENTIAL)

N-LINKED (GLCNAC. ..) (POTENTIAL)

; 63A428753167C7EF CRC64;
                                                                                                                                                                                                                                                                                                                                           Score 1145;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                               CYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                        DISINTEGRIN-LIKE TSP TYPE-1.
                                                                                                                                                                                                                                                                                                                                                                                                        SPACER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZINC (CATALYTIC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY ADAMTS-4.
                                                            Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY
                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         (CATALYTIC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycoprotein;
chromosomal
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    (ADAM-TS1).

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1.7e-76;
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mapping
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(BY
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                                                                                                       and metalloproteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            zymogen;
                                                                                                                                                                                                                                                                                                                                                  Length 630;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY).
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                                                            Euteleostomi;
; Murinae; Mus
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InterPro; InterPro;

IPR001762; IPR002870; IPR001590;

Disintegrin.
Pep_M12B_propep.

InterPro;

MEROPS; M12.222; -MGD; MGI:109249; Adamts1

D67076;

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Genomics [2]
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Ohno H., Matsushima K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97150761; PubMed-8995297; MEDLINE-97150761; MEDLINE-97150761; MEDLINE-97150761; MEDLINE-1, NAKAShima E.,
   EMBL;
                                                                                                          use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restricted the companion of the companion of the control of the companion of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cathepsin L proteases.";
Proc. Natl. Acad. Sci. U.S.A. 97:4689-4694(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [5]
FUNCTION, AND INDUCTION.
MEDLINE=20243757; PubMed=10781075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "ADAMTS-1 cleaves a cartilage proteoglycan, FEBS Lett. 478:241-245(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=20389568; PubMed=10930576;
Kuno K., Okada Y., Kawashima H., N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "ADAMTS-1 is an active metalloproteinase extracellular matrix.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "ADAMTS-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHARACTERIZATION, AND MUTAGENESIS MEDLINE-99303657; PubMed=10373500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Molecular cloning of a
disintegrin family prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robker R.L.,
Richards J.S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inflammation associated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIPOPOLYSACCHARIDE. ALSO INUCED BY LH CELLS OF PREOVULATORY FOLLICLES.

DOMAIN: THE SPACER DOMAIN AND THE FOR A TIGHT INTERACT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE FOR A TIGHT INVERACTION WITH THE EXTRACELLULAR MATRIX. PYM: THE PRECURSOR IS CLEAVED BY A FURLN ENDOPEPTIDASE. SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B. SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN. SIMILARITY: CONTAINS 3 TSP TYPE-1 DOMAIN. SIMILARITY: CONTAINS 3 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY).

CATALYTIC ACTIVITY: CLEAVES AGGRECAN AT THE 1691-GLU-|-LEU-1692
SITE, WITHIN THE CHONDROITIN SULFATE ATTACHMENT DOMAIN.

COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).

SUBCELLULAR LOCATION: SECRETED. ASSOCIATED WITH THE EXTRACELLUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, AND MAY INVOLVED IN ITS TURNOVER. HAS ANGIGGENIC INHIBITOR ACTIVITY (
SIMILARITY). ACTIVE METALLOROTEASE, WHICH MAY BE ASSOCIATED VARIOUS INFLAMMATORY PROCESSES AS WELL AS DEVELOPMENT OF CANC CACHEXIA. MAY PLAY A CRITICAL ROLE IN FOLLICULAR RUPTURE (BY
                                                                                                                                                                                                                                                                                                                                                                                                         FRAMESHIFT IN POSITION 7.
                                          AB001735;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Terashima Y.,
   5; BAA24501.1;
BAA11088.1; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          274:18821-18826(1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kawashima
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1; ALT_INIT.
ALT_FRAME.
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STIMULATION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROTEOGLYCAN, AND MAY BE INHIBITOR ACTIVITY (BY
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                                                                                                                                                                                   Usage
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MBL outstation -
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PROPEP
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Pfam; PF01421; Reprolysin; 1.
Pfam; PF01562; Pep_M12B_propep; 1.
SMART; SM00209; TSP1; 3.
                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00142
Hydrolase; Metal
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PROSITE; PS00427;
PROSITE; PS50092;
                 403
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                                                                   LVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVG
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               PWSPCSARFITDFLDNGYGHCLLDKPEAPLHLP
                                           RSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEE
                                                                                                                                          AKCGVMDDETLPTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSSPRYVET
                                                                                                                                                                           LSLCEG-VRGAFYLQGEEFFIQPAPGVATERLAPAVPEEESSARPQFHILRRRRGSG-G
                                                                                                                                                                                                                             LLLELEQDSGVQVEGLTVQYLGQAPELLGGAE-----PGTYLTGTINGDPESVAS
PWSPCSAYMVTSFLDNGHGECLMDKPQNPIKLP
                                                                                                       MLVADQSMADFHGSGLKHYLLTLFSVAARFYKHPSIRNSISLVVVKILVIYEEQKGPEVT
                                                                                                                                                            PMCNV------
                                                                                                                                                                                             LHWDGGALLGVLQYRGAELHLQPLEG-----GTP--NSAGGPGAHILRRKSPASGQG
                                                                                                                                                                                                               LHLKLQPDSGFLAPGFTLQTVGRSP----GSEAQHLDPTGDLAHCFYSGTVNGDPGSAAA
                                                                                                                                                                                                                                                MLLLLLASITMLLCARGAHGRPTEEDEELVLPSLERA---PGHDSTTTRL--RLDAFGQQ
                                 RSCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKHCASLNGVTGDS-HLMASMLSSLDHSQ
                                                                                                                                                                                                                                                                                  al Similarity
212; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PS00142;
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                                                                                                                                                                                                                                                                                                                                      548
721
765
783
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403
335
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lular
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DISINTEGRIN_1; FALSE_NEG
TSP1; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZINC_PROTEASE; 1
                                                                                                                                                    105841 MW;
                                                                                                                                                                                                                                                                                          46.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  matrix;
                                                                                                                                                                                                                                                                                   66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zinc; Signal; Glyo
x; Heparin-binding
                                                                                                                                                                                                                                                                                                                              N-LINKED
E->Q: LOS
N -> S (I
                                                                                                                                                                                                                                                                                 Score 979; DB 1;
Pred. No. 4.3e-64;
6; Mismatches 109
                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                             TSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADAMTS-1.
CYSTEINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                         TSP TYPE-1
                                                                                                                                                                                                                                                                                                                                                                                                                                   CYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                  POLY-ARG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                                                             ->Q: LOSS OF ACTIVITY.
-> S (IN REF. 2).
-> S (IN REF. 2).
42EBDA5549
                                                                                                                                                                                                                                                                                                                     42EBDA55499FB6C1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE-1 1.
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                                                                                                                                                                                                                                                                                                                                                      (GLCNAC.)
(GLCNAC.)
(GLCNAC.)
                435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Glycoprotein;
                                                                                                                                                                                                                                                                                   109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
) (BY SIMILARITY).
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(BY
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SIMILARITY).
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(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
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                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                             191
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                                                   402
                                                                     383
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                                                                                                                                          263
                                                                                                                                                                            203
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RESULT 4
ATS1_RAT
InterPro; IPR001590; R
InterPro; IPR000884; T
InterPro; IPR000130; Z
Pfam; PF00090; tsp_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATS1_RAT
                                                                                                                                                                                                                             the European Bloinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for contentites requires a license agreement (See http://www.isb-sib.ch/ar or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Diamantis I., Luethi M., Hoesli M., Re "Cloning of the rat ADAMTS-1 gene and endothelial cells in cirrhotic rats."; Liver 20:165-172(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-1 precursor (EC 3.4.24.-) (A disintegrin and math thrombospondin motifs 1) (ADAM-TS 1) (ADAM-TS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Induction of a disintegrin
thrombospondin type I motif
Submitted (MAY-1999) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-Sprague-Dawley;
Liu X., Tu Y., Yin T.,
Little S.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
NCBI_TaxID=10116;
                                                                                                                                                                                                  EMBL; AF149118;
                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW
                                                                                                                                                                                                                                                                                                                                                                                                                   <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN*Sprague-Dawley; TISSUE-Live
MEDLINE*20304099; PubMed*10847486;
                                                                                                                                    InterPro; IPR001762;
InterPro; IPR002870;
                                                                                                                                                                    EMBL; AF304446;
MEROPS; M12.222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 18-967 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                   SIMILARITY).

SIMILARITY: BELONGS TO PEPTIDASE FAMILY MI:
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOI
SIMILARITY: CONTAINS 3 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                              INDUCTION: DOWN-REGULATED IN ENDOTHELIAL CELLS CIRRHOTIC LIVER.
DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, AND MAY BI INVOLVED IN ITS TURNOVER. HAS ANGIOGENIC INHIBITOR ACTIVITY (BY SIMILARITY). ACTIVE METALLOPROTEASE, WHICH MAY BE ASSOCIATED WI'VARIOUS INFLAMMATORY PROCESSES AS WELL AS DEVELOPMENT OF CANCER CACHEXIA. MAY PLAY A CRITICAL ROLE IN FOLLICULAR RUPTURE (BY SIMILARITY).

CATALYTIC ACTIVITY: CLEAVES AGGRECAN AT THE 1683-GLU-|-LEU-1684 SITE, WITHIN THE CHONDROITIN SULPATE ATTACHMENT DOMAIN.

COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).

COFACTOR: BINDS 1 ZINC SECRETED. ASSOCIATED With the extracellul
                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN: THE SPACER DOMAIN AND FOR A TIGHT INTERACTION WITH 1 PTM: THE PRECURSOR IS CLEAVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            matrix (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9ERI1;
                                                                                                                       IPR002870;
IPR001590;
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                                                                                                                                                                                  AAD34012.1; -.
AAG29823.1; -.
                                                                                                                                  Disintegrin.
Pep_M12B_propep.
                                                                                       Zn_MTpeptdse
                                                                                                       Reprolysin.
TSP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Johnstone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                    PEPTIDASE FAMILY M128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and metalloprotease with (ADAMTS).";
EMBL/GenBank/DDBJ databas
                                                                                                                                                                                                                                                                                                                                                                                                                 THE BY
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A FURIN ENDOPI
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                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                   FURIN ENDOPEPTIDASE
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SMART; Pfam;

PS50215; PS00142;

ADAM_MEPRO; 1. ZINC_PROTEASE;

PF01421; Reprolysin; 2.
PF01562; Pep_M12B_propep;
; SM00209; TSP1; 3.

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DOMAIN
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DOMAIN
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443
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                                                                           LLELEQDSGVQVEGLTVQYLGQAPELLGGAE------PGTYLTGTINGDPESVASL 142
                                 LVADQSMADFHGSGLKHYLLTLFSVAARFYKHPSIRNSISLVVVKILVIYEEQKGPEVTS
                                                                                                                    VVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGP
                                                                                                                                                                                         HWDGGALLGVLQYRGAELHLQP------LEGGTP--NSAGGPGAHILRRKSPASGQGP 192
                                                                                                                                                                                                          HLKLQPDSGFLAPGFTLQTVGRSP----GSEAQHLDPTGDLAHCFYSGTVNGDPSSAAAL
                                                                                                                                                                                                                                              MLLLLLASITMLLCVRGAHGRPTEEDEELVLP----
                                                                                                                                                                                                                                                            LLLLLLAS--LLPSARLA--SPLPREEEIVFPEKLNGSVLPGSGTPARLLCRLQAFGETL
           WSPCSARFITDFLDNGYGHCLLDKPEAPLHLP 435
                                                  SCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEP
                                                                   NAALTLRNFCSWQKQHNSPSDRDPEHYDTAILFTRQDLCGSHTCDTLGMADVGTVCDPSR
                                                                                                                                      KCGVMDEETLPTSNSGRESQNTPDQWPLRNPTPQGAGKPTGPGSIRKKRFVSSPRYVETM
                                                                                                                                                          MCNV
                                                                                                                                                                        SLCEG-VRGAFYLQGEEFFIQPAPAVATERLVPAEPKEESIAPPRFHILRRRRGSG-GA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     se; Metalloprotease; Zinc; Signal; Glyc
Extracellular matrix; Heparin-binding.
                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS50092;
PS00427;
                                                                                                                                                                                                                                                                                                                                 Conservative
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DISINTEGRIN_1;
                                                                                                                                                                                                                                                                                                                 105705
                                                                                                                                                                                                                                                                                       41.28;
                                                                                                                                                        ---KAPLGSPSP----RPR----RAKRFASLSRFVETL
                                                                                                                                                                                                                                                                               ; 69
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                                                                                                                                                                                                                                                                          Score 977.5; r
Pred. No. 5.5e-
69; Mismatches
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N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
I -> V (IN REF. 2).
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SPACER.
TSP TYPE-1
TSP TYPE-1
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V -> A (IN
R -> P (IN
L -> TR (I
R -> G (IN
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TMLV
S ->
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F93C864F6DCDB4CF
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> P (IN REF. 2)
> TR (IN REF. 2)
> G (IN REF. 2)
> G (IN REF. 2)
> C (IN REF. 2)
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> V (IN REF. 2)
> T (IN REF. 2)
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                                                                                                                                                                                                                                                                               108;

    VSGDSHLMASMLSSLDHSQP

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
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SIMILARITY).
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                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                     283
                                                                                                                                      263
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                                                                                                                                                                         203
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RESULT 5
ATS1_HUMAN
A Hattori M., Fujiyama A., Taylor T.D., Watanabe H., Yada T.,
A Park H.-S., Toyoda A., Ishii K., Totoki Y., Choi D.-K., Soeda E.
A Ohki M., Takagi T., Sakaki Y., Taudien S., Blechschnidt K., Pol.
A Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D.,
A Reichwald K., Rump A., Schillhabel M., Schudy A., Zimmermann W.
A Rosenthal A., Kudoh J., Shibuya K., Kwasaki K., Asakawa S.,
A Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S., Antonarakis S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.
A Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.
Scharfe M., Schoen O., Desario A., Reichelt J., Kauer G., Bloeci
A Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagan
A Wehrmeyer S., Borzym K., Gardiner K., Nizetic D., Francis F.,
Lehrach H., Reinhardt R., Yaspo M.-L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATS1_HUMAN STANDARD; PRT; 967 AA.
Q9UH18; Q9UP80; Q9UH83; Q9P2K0; Q9NSJ8;
30-MAY-2000 (Rel. 39, Created)
16-QCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-1 precursor (EC 3.4.24.-) (A disintegrin and metalloprovith thrombospondin motifs 1) (ADAM-TS 1) (ADAM-TS1) (METH-1).
ADAMTS 10 R METH1 OR KIAA1346.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Glienke J., Schmitt A.U., ranner, Rosenthal A., Thierauch K.H.;
"Differential gene expression by endothelial cells
                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDILINE-20181126; PubMed-10718198; Nagase T., Kikuno R., Ishikawa K.-I., Hirosawa M., Ohara O "prediction of the coding sequences of unidentified human The complete sequences of 150 new cDNA clones from brain w for large proteins in vitro."; DNA Res. 7:65-73(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-20247184; PubMed-10785405; Glienke J., Schmitt A.O., Pilarsky C., Rosenthal A., Thierauch K.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            orthologue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                         "The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Brain;
MEDLINE-20181126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. TISSUE=Endothelial cells;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vazquez F., Hastings G., Ortega M.-A., La
Lombardo M., Iruela-Arispe M.L.;
"METH-1, a human ortholog of ADAMTS-1, an
family of proteins with angio-inhibitory
J., Biol. Chem. 274:23349-23357(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (JUL-1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Casas C., Pritchard M.A., Estivill X., Casas C., Pritchard M.A., Estivill X., "Cloning, characterization and mapping orthologue of murine Adamts-1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                  Blum H., Bauersachs (
Submitted (MAR-2000)
                                                                                                    TISSUE-Melanoma;
                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. MEDLINE=20289799; PubMed=10830953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99367466;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
                                                                                                                                                     Nature
                                                                                                                      SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM
              m H., Bauersachs S., Mewes H.-W., Weil B., Wiemann S.; mitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
FUNCTION: CLEAVES AGGRECAN, A CRATILAGE PROTEOGLYCAN, AND MAY BE INVOLVED IN ITS TURNOVER (BY SIMILARITY). HAS ANGIOGENIC INHIBITOR ACTIVITY. ACTIVE METALLOPROTEASE, WHICH MAY BE ASSOCIATED WITH
                                                                                                                                                     DNA sequence of human chromosome re 405:311-319(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J. Biochem. 267:2820-2830(2000).
                                                                                                                     418-967
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A
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ngs G., Ortega M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                     FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION.
                                                                                                                     N.A.
PROCESSES AS WELL AS
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on human chro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hinzmann B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nd METH-2.ar activity.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T.F.,
DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and metalloproteinase
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                                                                                                                                                                                                                                                                                                            Zimmermann W.,
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                                                                                                                                                                                                                                                                          Antonarakis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        brain which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ohara O.;
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                                                                                                                                                                                                                                                          Brandt
                                                                                                                                                                                                                                                                                                                                      Soeda E.,
K., Polley A.,
                                                                                                                                                                                                           Dagand F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В.,
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                                                                                                                                                                                                                                          Bloecker H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genes.XVI
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CANCER
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                                                                                                                                                                                                                                                                          S.E.,
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Query Match
Best Local Similarity
Matches 208; Conserv
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DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
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CONFLICT
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DOMAIN
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InterPro;
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InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; M12.222; -.
Genew; HGNC:217; ADAMTS1.
                                                                                                                                                                                                                                                                                                                   Repeat; Extracellular SIGNAL 1 4
                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50215; ADAM_MEPRO; 1.
PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
PROSITE; PS50092; TSP1; 2.
PROSITE; PS00142; ZINC_PROTEASE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                          METAL
                                                                                                                                                                                                                                                                   METAL
                                                                                                                                                                                                                                                                                                                                              Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                       _SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACHEXIA. MAY PLAY A CRITICAL ROLE IN FOLLICULAR RUPTURE. CAPALYTIC ACTIVITY: CLEAVES AGGRECAN AT THE 1938-GLU-1-LEU-1939 SITE, WITHIN THE CHONDROITIN SULFATE ATTACHMENT DOMAIN. CCFACTOR: BINDS 1 ZINC ION (BY SIMILARITY). SUBCELLULAR LOCATION: Secreted. Associated with the extracellularity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B. SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN. SIMILARITY: CONTAINS 3 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       matrix (By similarity).

DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS AR FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX. PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE SIMILARITY).

SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AF170084; //
; AF060152; //
; AF207664; //
; AB037767; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        605174;
                                                                                                                                                                                                                                                                                                                                                                                                       PF01421; Reprolysin; 2.
PF01562; Pep_M12B_propep;
SM00209; TSP1; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AL162080; CAB82413.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AP001697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR001762; IPR002870; IPR001590; IPR000884;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR000130;
                                                                                                                                                                                                                                                                                                                                           Metalloprotease; Zinc;
  Conservative
                                                                                                                                                                                                                                         253
198
401
402
405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAD48080.1; ALT_INIT.
; AAF23772.1; -.
; BAA92584.1; ALT_INIT.
; BAA95502.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF15317.1;
                                                              411
559
616
724
724
908
908
967
846
720
764
468
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           39.9%;
45.7%;
                                                    105383
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Pep_M12B_propep.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Reprolysin.
TSP1.
                                                                                                                                                                                                                                                                                                                               matrix;
  62;
                                                            POLY LYS.

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).

P -> A (IN REF. 1).

S -> N (IN REF. 1).
                                                    ž
Score 946; DB 1;
Pred. No. 1.1e-61;
2; Mismatches 119
                                                                                                                                                                            CYS-RICH.
SPACER.
                                                                                                                                                                                                             CYSTEINE SWITCH (POTENTIAL).
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
ZINC (CATALYTIC) (BY SIMILARITY).
DISINTEGRIN-LIKE.
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                                                                                                                                                                                                    TSP TYPE-1 1.
                                                                                                                                                                                                                                                                                           ADAMTS -
                                                                                                                                                                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                             Heparin-binding
                                                   C189389324741ED1
                                                                                                                                                                                                                                                                                                      SIMILARITY.
                                                                                                                                                                                                                                                                                                                                          Signal; Glycoprotein;
                                                                                                                                                    ωΝ
                       Length 967;
                                                 CRC64;
  Indels
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                                                                                                                                                                                                                                                                                                                                           Zymogen;
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Gaps
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ATS8_HUMAN
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                                      MEDLINE-20079168; PubMed-10610729;
Georgiadis K.E., Hirohata S., Seldin M.F., Apte S.S.,
Georgiadis K.E., Hirohata S., Seldin M.F., Apte S.S.,
Georgiadis K.E., Hirohata S., Seldin M.F.,
F. MADAM-TS far
mouse chromosome 9 and human chromosome 11.";
Genomics 62:312-315(1999)
-1- FUNCTION: HAS ANTI-ANGIOGENIC PROPERTIES.
-1- COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
-1- SUBCELLULAR LOCATION: Secreted. Associated with 1
matrix (By similarity).
-1- TISSUE SPECIFICITY: HIGLY EXPRESSED IN ADULT AND
EXPRESSION IN BRAIN, PLACENTA, HEART, STOMACH AND
                                                                                                                                                                                                                                                                                                                                                                                                                                           (90PF); (2007-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 40, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-8 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 8) (ADAM-TS 8) (ADAM-TS8) (METH-2)
                                                                                                                                                                                                                        J. Biol.
                                                                                                                                                                                                         SEQUENCE OF 195-440 FROM N.A
                                                                                                                                                                                                                                   Combardo M., Iruela-Arispe M.L.;
"METH-1, a human ortholog of ADAMTS-1, arifamily of proteins with angio-inhibitory
J. Biol. Chem. 274:23349-23357(1999).
                                                                                                                                                                                                                                                                                                             TISSUE=Lung;
MEDLINE=99367466;
                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9UP79; Q9NZS0; 16-OCT-2001 (Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATS8_HUMAN
                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                ADAMTS8 OR METH2
                                                                                                                                                                                                                                                                                            Vazquez F., Hastings
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KIDNEY.
- DOMAIN: THE FOR A TIGHT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPS
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                                                                                                                                                                                                                                                                                                                                                                                                                  (Human)
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 SPACER DOMAIN ANI
INTERACTION WITH
                                                                                                                                                                                                                                                                                          PubMed=10438512;
ngs G., Ortega M.-A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -SPASGQGPMCNVKAP----LGSPSPRPR-RAKRFASLSRFVETLV
                                                                                                                                                                                                                                                                                                                                                                                     Craniata; V
Catarrhini;
             AND
THE E
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               TSP TYPE-1
                                                                                                                                                                                                                                                    and METH-2
ry activity
                                                                                                                                                                                                                                                                                             Lane
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                                                                                                                                                                                                                                                                                             T.F.,
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                                           AND F
               DOMAINS
                                                                                                                                                            .S.;
family
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                                           FETAL I
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                                            BRAIN
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InterPro; IPR001870; Pep_M12B_prope;
InterPro; IPR001590; Reprolysin.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000130; Zn_MTpeptdse.
Pfam; PF01090; tsp_1; 2.
Pfam; PF01421; Reprolysin; 1.
Pfam; PF01522; Pep_M12B_propep; 1.
SMART; SM00209; TSP1; 2.
SMART; SM00209; TSP1; 2.
PROSITE; PS00142; ZINC_PROTEASE; 1.
PROSITE; PS000427; DISINTEGRIN_1; FAIRCSTEE; PS000427; PAIRCSTEE; PS000427; PAIRCSTEE; PS000427; PAIRCSTEE; PS000427; PAIRCSTEE; PS000427; PAIRCSTEE; PS000427; PAIRCSTEE; PS000427; PAIRC
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PROSITE; PS50092; TSP1; 1.
PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
Hydrolase; Metalloprotease; Zinc; Signal; G
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EMBL; AF175283; AAF25806.1;
HSSP; P34179; 1IAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                       CRLQAFGETLLLELEQDSGVQVEGLTVQYLGQAPELLGGAE--PGTYLTGTINGDPESVA 140
                                                                                                                                                                         PIVPLSWLVWLLLLLLASLLPSARLASPLP----REEEIVFPEKLNGSVLPGSGTPARLL
AVSLCRG-LSGSFLLDGEEFTIQ-----
                                 SLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGA--HILRRKSPASG---
                                                                     LHLSAFGKGFVLRLAPDDSFLAPEFKIERLGGSGRATGGERGLRGCFFSGTVNGEPESLA 115
                                                                                                                                          PAAP-RWLPFULLLLL-LLPLARGAPARPAAGGQASELVVPTRLPGSA-----GELA 55
                                                                                                                                                                                                                   195;
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E -> R (IN REF. 2).
E -> R (IN REF. 2).
FYLTELLOGHODCLLDAPGAALPLPTGL -> FSGCHLQGWIHFKYLCKCVSELKCDLMP (IN REF. 2).
MW; 57D70EE03D5739D3 CRC64;
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ZINC (CATALYTIC)
BY SIMILARITY.
ZINC (CATALYTIC)
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SPACER.
                                                                                                                                                                                                                                  Score 863.5;
Pred. No. 1.:
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BY SIMILARITY.
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RESULT 7
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P57110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-OCT-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-8 precursor (EC 3.4.24.) (A disintegrin and metalloproteinase with thrombospondin motifs 8) (ADAM-TS 8) (ADAM-TS8) (METH-2).
                                                                                                                                                                                                                    modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                  between the Swiss Institute of Bioinformatics and the the European Bioinformatics Institute. There are no reuse by non-profit institutions as long as its conternal contents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-20079168; PubMed-10610729;
Georgiadis K.E., Hirohata S., Seldin M.F.,
"ADAM-TS8, a novel metalloprotease of the F
mouse chromosome 9 and human chromosome 11.
                                                                                                                      EMBL; AF175282; 1
HSSP; P34179; 111
MEROPS; M12.226;
                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genomics 62:312-315(1999).
-!- FUNCTION: HAS ANTI-ANGIOGENIC PROPERTIES (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY).
SIMILARITY: BELONGS TO PEPTIDASE FAMILY MISSIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOISIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND LOW EXPRESSION DURING MOUSE DEVELOPMENT.

DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS AF
FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.

PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         matrix (By similarity).
TISSUE SPECIFICITY: EXP
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                                                                                                                                                 lIAG.
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MGD; MGI:1353468; Adamts8. InterPro; IPR001762; Disintegrin. InterPro; IPR001590; Reprolysin. InterPro; IPR000884; TSP1.

InterPro;

Zn_MTpeptdse

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DT 15-OCT
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Best Local Sim
Matches 192;
ATS5_MOUSE STANDAKU;
OSHOO1;
OSHOO1;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-5 precursor (EC 3.4.24.-) (A disintegrate)
ADAMTS-5 precursor (EC 3.4.24.-) (ADAM-TS 5) (AD
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CARBOHYD
SEQUENCE
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PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
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SIGNAL 1 28
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                                                                                                                                         PVMAHVDPEEPWSPCSAREITDFLDNGYGHCLLDKPEAPLHLPVTG
                                                                                                                                                                                                                             SGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGV-STCDTLGM
                                                                                                                                                                                                                                                                     ASLSREVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILG
| :||||||||||||||:::||
                                                                                                                                                                                                                                                                                                                                                         PFFIHVNKTLPWSPCSAVYLTELLDDGHGDCLLDAPTSVLPLP-TG
                                                                                                                                                                                   ADVGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMA
                                                                                                                                                                                                                 KERWGPEVSDNGGLTLRNFCSWQRRFNKPSDRHPEHYDTAILFTRQNFCGKGEQCDTLGM
                                                                                                                                                                                                                                                          GETILLELEQDSGVQVEGLTVQYLGQAPELLGGAEP---GTYLTGTINGDPESVASLH-- 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WLLLLLASLLPSARLASPLP-----REEEIVFPEKLNGSVLPGSGTPARLLCRLQAF
                                                                                                                                                                        ADVGTICDPDKSCSVIKDEGLQAAYTLAHELGHVLSMPHDDSKPCVRLFGPMG-KYHMMA
                                                                                                                                                                                                                                                                                                     LPQGLEWEVEMGNGQGQERSDNEEDRKQDKEGLLKETEDSRKVPPPFGSKT----RSKRF
                                                                                                                                                                                                                                                                                                                                            AGWSGSFLLA----GEEFTIQPQGAGDSLDQPHRLQRWGPGQ---RREDPGLAAAEVFP
                                                                                                                                                                                                                                                                                                                                                                                     GQGFVLRLAPDASFLAPEFKIERLGGSSAAAGG-EPGLRGCFFSGTVNGERESLAAMSCV 121
                                                                                                                                                                                                                                                                                                                                                                                                                             WPPLLLLLQLPPPPLVCGAPAGPGTGAQASELVVPTRLPGSA-----SELAFHLSAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PF01421; Reprolysin; SM00209; TSP1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00142; ZINC_PROTEASE; PS50215; ADAM_MEPRO; 1.
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388
453
542
706
615
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tracellular matrix; Hepa
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                                                                                                                                                                                                                                                                                                                 ---ASGQG-------PMCNVKAPLGSPSPRPRRAKRF
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41.2%;
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TSP TYPE-1
N-LINKED (G
N-LINKED (G
N-LINKED (G
N-LINKED (G
N-LINKED (G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
TSP TYPE-1 1.
CYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 846.5;
Pred. No. 2e
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BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inc; Signal; Glyo
Heparin-binding
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-LINKED (GLCNAC. . .) (P
124D4132B33A0CAE CRC64;
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D (GLCNAC. .
D (GLCNAC. .
             sintegrin and metalloproteinase
5) (ADAM-TS5) (Aggrecanase-2)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124;
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SIMILARITY)
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) (POTENTIAL).
) (POTENTIAL).
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Pfam: PF00090; tsp_1; 2.

Pfam: PF01421; Reprolysin; 1.

Pfam: PF01562; Pep_M12B_propep; 1

Pfam: PF001562; Pep_M12B_propep; 1

SMART; SM00209; TSP1; 2.

PR0SITE; PS500215; ADAM_MEPRO; 1.

PROSITE; PS50092; TSP1; 1.

PROSITE; PS00142; ZINC_PROTEASE; PR0S1TE; PS00142; ZINC_PROTEASE; PROSITE; PS000427; DISINTEGRIN_1;
CHAIN
SITE
METAL
ACT_SITE
METAL
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                          Repeat;
SIGNAL
PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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J. Biol. Chem. 274:25555-2563(1999).

J. BIOL. Chem. 274:2555-2563(1999).

J. BIOL. Chem. 274:25555-2563(1999).

J. BIOL. Chem. 274:2555-2563(1999).

J. BI
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Hurskainen T.L., Hirohata S., Seldin M.F.,
"ADAM-TS5, ADAM-TS6, and ADAM-TS7, novel m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                      Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; M12.225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF140673; AAD56356.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ADMP-2) (Implantin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PTM: THE PRECURSOR IS CLEAVED BY A FURIN EI
SIMILARITY:
SIMILARITY: BELONGS TO PEPTIDASE FAMILY MI-
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOI
SIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX. PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
SUBCELLULAR LOCATION: Secreted. Associated with the extracellular matrix (By similarity).
DEVELOPMENTAL STAGE: EXPRESSED SPECIFICALLY IN THE PERI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMPLANTATION PERIOD IN EMBRYO UNDECTABLE LEVEL THEREAFTER.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGI:1346321;
                                                                                                                                                                                                                                                                                   Extracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPR001762; Disintegrin.
IPR002870; Pep_M12B_pro
IPR001590; Reprolysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR000884; TSP1.
IPR000130; Zn_MTpeptdse
                                                                                                                                                                                                                                                                                                    Metalloprotease;
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                                                                                                                                                                                                                                                                                                  ; ADAM_MEPRO; 1.; TSP1; 1.; ZINC_PROTEASE; 1; DISINTEGRIN_1; F. loprotease; Zinc;
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261
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874
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Rodentia;
                                                                                                                                                                                                                                                                                   matrix.
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ZINC (CATALYTIC) (I
DISINTEGRIN-LIKE,
TSP TYPE-1
                                                                                                               CYSTEINE SWITCH (
ZINC (CATALYTIC)
BY SIMILARITY.
ZINC (CATALYTIC)
ZINC (CATALYTIC)
                                     CYS-RICH.
SPACER.
                                                                                                                                                                                                                     POTENTIAL.
ADAMTS-5.
                                                                                                                                                                                                                                                            POTENTIAL.
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                                                                                                                                                                                                                                                                               FALSE_NEG.
. signal; Glycoprotein; Zymogen;
                    TYPE-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND
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DOMAIN.
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(BY
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                                                                                                                      SIMILARITY).
SIMILARITY).
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(99UNA0; O9UKP2;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-5 precursor (EC 3.4.24-) (A disintegrin and m
With thrombospondin motifs 5) (ADAM-TS 5) (ADAM-TS5)

(ADMP-2) (ADAM-TS 11)
ADAMTS5 OR ADMP2 OR ADAMTS11.
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CARBOHYD
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CARBOHYD
CARBOHYD
SEQUENCE
MEDLINE-99367476; PubMed-10438522;
Abbaszade I., Liu R.-Q., Yang F., Rosenfeld S.A., Ross O.H.,
Link J.R., Ellis D.M., Tortorella M.D., Pratta M.A., Hollis J.M.,
Wynn R., Duke J.L., George H.J., Hillman M.C. Jr., Murphy K.,
Wiswall B.H., Copeland R.A., Decicco C.P., Bruckner R., Nagase H.,
Ito Y., Newton R.C., Magolda R.L., Trzaskos J.M., Hollis G.F.,
Arner E.C., Burn T.C.;
                                                                                                SEQUENCE FROM N.A.
                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                       HUMAN
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70; Conservative
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Primates;
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-LINKED (GLCNAC...
-LINKED (GLCNAC...
-LINKED (GLCNAC...
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SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE-20289799; PubMed-10830953;

Hattori M., Fujiyama A., Taylor T.D., Watanabe H., Yada T.,

Park H.-S., Toyoda A., Ishii K., Totoki Y., Choi D.-K., Soeda E.,

Ohki M., Takagi T., Sakaki Y., Taudian S., Blechschmidt K., Polle;

Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D.,

Reichwald K., Rump A., Schillhabel M., Schudy A., Zimmermann W.,

Rosenthal A., Kudoh J., Shibuya K., Kawasaki K., Asakawa S.,

Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S.

Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,

Scharfe M., Schoen O., Desario A., Reichelt J., Kauer G., Blocke

Scharfe M., Schoen O., Desario A., Reichelt J., Kauer G., Blocke

Scharfe M., Schoen O., Desario A., Reichelt J., Kauer G., Blocke
                                                                                                                                                  EMBL: AF142099; I
EMBL: AP001698; I
EMBL: AP001697; I
EMBL: AF141293; I
HSSP: Q9PW35; IB0
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[2]
                                         InterPro;
InterPro;
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                                                                                                                                                                                                                                                          use by non-profit institution modified and this statement modified and this alicense
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J. Biol. Chem. 274:25555-25563(1999).
-1- FUNCTION: CLEAVES AGGRECAN, A CAP
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"The DNA sequence of human chromosome 21.";
                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                This
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Hurskainen T.L., Hirohata S., Seldin
"ADAM-TS5, ADAM-TS6, and ADAM-TS7, nd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Fetal brain,
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                                                                                                                                                                                                                                                                                                                                                                                                                                         CHONDROBLASTOMA, FIBROUS TISSUE A ARTHRITIC PATIENT.

DOMAIN: THE SPACER DOMAIN AND THE FOR A TIGHT INTERACTION WITH THE PTM: THE PRECURSOR IS CLEAVED BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted.
matrix (By similarity).
TISSUE SPECIFICITY: EXPRESSED A'
BUT ALSO IN OTHER TISSUES, SUCH
CERVIX, UTERUS, BLADDER, ESOPHA
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                                                                                                                      HGNC: 221; ADAMTS5
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                          IPR001762; Disintegrin.
IPR002870; Pep_M12B_propep.
IPR001590; Reprolysin.
IPR000884; TSP1.
IPR000130; Zn_MTpeptdse.
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BAA95504.1;
BAA95503.1;
AAF02493.1;
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ESOPHACUS, RIB CARTILAGE,
TISSUE AND JOINT CAPSULE FROM A
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GNCLLDLPRKQILGPEELP
                 GHCLLDKPE----APLHLP
                                               HELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGY
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                                    HEIGHLLGLSHDDSKFCEETFGSTEDKR-LMSSILTSIDASKPWSKCTSATITEFLDDGH
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; SM00209; TSP1; 2.
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PS00427; DISINTEGRIN_1; FALSE_NEG
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ZINC (CATALYTIC)
ZINC (CATALYTIC)
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ZINC (CATALYTIC) (BY SIMILARITY).
DISINTEGRIN-LIKE.
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-> H (IN REF. 3).
-> L (IN REF. 2).
B64281502F28193B (
                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal;
                                                                                                                                                                                                                                                                                                                                                              4e-40;
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                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                    156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL).
(BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
                                                                                                                                                                                                                                                                                                                                                                      Length
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(POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                    111;
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                        240
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                                                                          409
                                                                                                                349
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_HUMAN
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Q9P2N4; Q9NR29;

16-OCT-2001 (Rel. 40, Created)

16-OCT-2001 (Rel. 40, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)

ADAMTS-9 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin mottifs 9) (ADAM-TS 9) (ADAM-TS9).

ADAMTS9 OR KIAA1312.
                                                                                                                              MIM;
                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                Pfam;
                                 Pfam;
                                              InterPro;
InterPro;
                                                                                            InterPro;
InterPro;
                                                                                                                                                                         EMBL; AF261918; AAF89106.1;
EMBL; AB037733; BAA92550.1;
HSSP; P15167; IATL.
                                                                                                                                                                                                                                         entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-20181126; PubMed-10718198;
Nagase T., Kikuno R., Ishikawa K.-I., Hirosawa M., Ohara O.;
"Prediction of the coding sequences of unidentified human genes."
The complete sequences of 150 new cDNA clones from brain which
                                                                                                                                            Genew: HGNC:13202; ADAMTS9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20396138; PubMed=10936055;
Clark M.E., Kelner G.S., Turbevill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                           MEROPS; M12.021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 159-1629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genomics 67:343-350(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                               nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADAMTS 9, a novel member
                                                                                                                                                                                                                                                                                                                                                          THYMUS.

DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX (BY SIMILARITY).

PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY SIMILARITY).

SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.

SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.

SIMILARITY: CONTAINS 11 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             matrix (By similarity).

ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A SHORT FORM; MAY BEE PRODUCED BY ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN ALL FETAL TISSUES.

EXPRESSED SLIGHTLY IN ADULT OVARY, PANCREAS, HEART, KIDNEY, LUNG, PLACENTA, ALSO DETECTED IN SPINAL CORD AND BRAIN. NOT DETECTED IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           large proteins in vitro.";
Res. 7:65-73(2000).
COPACTOR: BINDS 1 ZINC ION (BY SUBCELLULAR LOCATION: Secreted.
                                                                                                                               605421
                                                                          IPR001762; Disintegrin. IPR002870; Pep_M12B_pro IPR001590; Reprolysin.
                                              IPR000884; TSP1.
IPR000130; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMALL INTESTINE, TESTIS, LIVER, SKELETAL MUSCLE,
Reprolysin; 1. Pep_M12B_propep;
                               tsp_1; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SHORT ISOFORM).
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                                                                                              _propep
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ISOFORM)
                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                        There are no restrictions ong as its content is in
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                                                                                                                                                                                                                                                                                                                                                                                                                                   YB)
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                                                                                                                                                                                                                                                                                                                         collaboration
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SMART; SM00209;

TSP1; 12

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CARBOHYD
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PROSITE; PS00142; ZINC_PROTEASE; 1.
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                                                                                                                                                                                                                  LSWLVWLLLLLLASLLPSARLASP------LPR-----EEEIVFPEKLN--
                                  SLSRFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGS
                                                                                            G-MLGTFRSHDGDYFIEPLQSMDEQEDEEEQNKPHIIYRRSAPQREPSTGRHACDTSEHK
                                                                                                            GALLGVLQYRGAELHLQPLEG----
                                                                                                                              IAPLFTVTLLG-----TPGVNQTKFYSEEEAELKHCFYKGYVNTNSEHTAVISLCS
                                                                                                                                              QVEGLTVQYLGQAPELLGGAEPGT------YLTGTINGDPESVASLHWDG
                                                                                                                                                               GEPFPTNVHFKRTRRSINSATDPWPAFASSSSSSSSSSQAHYRLSAFGQQFLFNLTANAGF
                                                                                                                                                                                                 VSWAT-LLTLLVRDL---AEMGSPDAAAAVRKDRLHPRQVKLLETLGEYEIVSPIRVNAL
        GEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGV-STCDTLGMA
                         SYPRFYEYLYVADNRMYSYHGENLQHYILTLMSIYASIYKDPSIGNLINIYIYNLIYIHN
                                                           {\tt NRHSKDKKKTRARKWGERINLAGDVAALNSGLATEAFSAYGNKTDNTREKRTHRRTKRFL}
                                                                           -----RRKSPASGQGPMCNVK---APLGS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS50215;
PS00427;
                                                                                                                                                                                                                                           Similarity
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367
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1629
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752
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367
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1267
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CYSTEINE SWITCH (
ZINC (CATALYTIC)
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                  TSP TYPE-1
                                                                                                                                                                                                                                                                             MISSING
                                                                                                                                                                                                                                                                                                                      N-LINKED
                                                                                                                                                                                                                                                                                                                                                N-LINKED
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                                                                                                                                                                                                                                                   Score 649.5;
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ZINC (CATALYTIC)
ZINC (CATALYTIC)
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                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                        N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                          TSP TYPE-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inc; Signal; Glycoprotein; Zymogen;
Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY.
                                                                                                                                                                                                                                   Mismatches
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(GLCNAC . . . )

(GLCNAC . . . )
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DB 1;
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                                                                                                                                                                                                                                                                    CRC64;
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RESULT 11
ATS4_BOVIN
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-4 (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 4) (ADAM-TS 4) (ADAM-TS4) (Aggrecanase 1) (ADAM-TS4)
                    between
the Eurc
                                                                                                                                                                                                                                                                                                                                                                                                                                      Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tortorella M.D., Burn T.C., Pratta M.A., Abbaszade I., Hollis Liu R., Rosenfeld S.A., Copeland R.A., Decicco C.P., Wynn R., Rockwell A., Yang F., Duke J.L., Solomon K., George H., Bruckt Nagase H., Itoh Y., Ellis D.M., Ross H., Wiswall B.H., Murphy Hillman M.C. Jr., Hollis G.F., Newton R.C., Magolda R.L., Trzaskos J.M., Arner E.C.;

"Purification and cloning of aggrecanase-1: a member of the Alfaction of the Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "n-3 fatty acids specifically modulate catabolic
articular cartilage degradation.";
J. Biol. Chem. 275:721-724(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 18-227 FROM N.A. MEDLINE-20092827; PubMed-10625599; Curtis C.L., Hughes C.E., Flannery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-99333677; PubMed-10403768; Flannery C.R., Little C.B., Hughes ("Expression of ADAMTS homologues in Biochem. Biophys. Res. Commun. 260::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
Bovidae; Bovinae; B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATS4_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Cartilage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 1-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Caterson B.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bos taurus (Bovine)
                                                                                             This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99286303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 18-227 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9913;

    (Fragments).

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family of proteins."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              465
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                                                                                                                                                                                                                                                                                                                                                      FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, INVOLVED IN ITS TURNOVER. MAY PLAY AN IMPORTANT ROLE DESTRUCTION OF AGGRECAN IN ARTHRITIC DISEASES.

CATALYTIC ACTIVITY: Cleaves aggrecan at the 392-Glu-
                      s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                            SIMILARITY: E
CAUTION: HAS
                                                                                                                                                                                                              matrix (By similarity).
INDUCTION: BY INTERLEUKIN-1
PTM: THE PRECURSOR IS CLEAV
                                                                                                                                                                                                                                                                                                                site.
COFACTOR: BINDS 1
                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION:
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non-profit instituend this statement
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                                                                                                                                            BELONGS TO
S SOMETIMES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cetartiodactyla; Ruminantia;
                                                                                                                                                                                                                                                                                                                   ZINC
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                                                                                                                                                                                                                                                                                       Secreted.
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                                                                                                                                            PEPTIDASE FAMILY M12B.
BEEN REFERRED TO ADAMTS2.
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es in articular cartilage.";
260:318-322(1999).
  not removed
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                                                                                                                                                                                                                                                                                                                   SIMILARITY)
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                                                                                                                                                                                                                   A FURIN ENDOPEPTIDASE
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Best Local
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"ADAM-TS5, ALAW, LL.,
Zinc Metalloproteases.";
J. Biol. Chem. 274:2555-2553(1999).
I. Biol. Chem. 274:2555-2563(1999).
II. COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
II. SUBCELLULAR LOCATION: Secreted. Associated with the extracellular matrix (By similarity).
II. TISSUE SPECIFICITY: EXPRESED IN HEART, BRAIN, PLACENTA, LUNG, LIVER, SKELETAL MUSCLE, KIDNEY, PANCREAS.
IVER, SKELETAL MUSCLE, KIDNEY, PANCREAS.
IPOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORTANT POR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.

"""" ""HE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         '_HUMAN
ATS7_F
                                                                                                                                                                                                          MEDLINE-99395124; PubMed-10464288;
Hurskainen T.L., Hirohata S., Seldin M.F., Apte S
"ADAM-TS5, ADAM-TS6, and ADAM-TS7, Novel Members
                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                      ADAMTS-7 precursor ( with thrombospondin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_CONS
                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9UKP4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                             i6-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-7 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 7) (ADAM-TS 7) (ADAM-TS7).
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Interpro; IPR000130;
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PS50215; ADAM_MEPRO; 1.
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; IPR000130; Zn_MTpeptdse.
PS00142; ZINC_PROTEASE; 1.
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ZINC (CATALYTIC)
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Pred. No. 1.
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L.7e-39;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF01421; Reprolysin; 1.
Pfam; PF01562; Pep_M12B_propep; 1.
SMART; SM00209; TSP1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MIM;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collabora between the Swiss institute of Bioinformatics and the EMBL outstatt the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no
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PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG
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LVVADAKMVEYHGQPQVESYVLTIMNMVAGLFHDPSIGNPIHITIVRLVLLEDEEEDLKI
                                          QAPERLAQRGDSSAPSTCGVQVYPELESRRERWEQRQQWRRPRLRRLHQRSVSKEKWVET
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155; Conser
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IPR001590; Reprolysin.
IPR000884; TSP1.
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2 TSP TYPE-1 DOMAINS.
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                                                                                                                                                                                                                                                                       Score 534.5;
                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                        TSP TYPE-1 1. CYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                              CYSTEINE SWITCH (POTENTIAL).
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                   TSP TYPE-1 2.
                                                                                                                                                                                                                                                                                                                               SPACER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL
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                                                                                                                                                                                                                             Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Signal; Glycoprotein; . Zymogen;
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                                                                                                                                                                                                                                        1.6e-31;
                                                                                                                                                                                                                                                  ВВ
                                                                ----PRPRRA-KRFASLSRFVET
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(BY SIMILARITY)
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2_HUMAN
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P58397;
                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Fetal lung;

MEDLINE-21264577; PubMed-11279086;

Cal S., Argueelles J.M., Fernandez P.L., Lopez-Otin C.;

"Identification, characterization, and intracellular processing ADAM-TS12, a novel human disintegrin with a complex structural organization involving multiple thrombospondin-1 repeats.";

J. Biol. Chem. 276:17932-17940(2001).

-! COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).

-! SUBCELLULAR LOCATION: Secreted. Associated with the extracel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-12 precursor (EC 3.4.24.-) (A disintegrin metalloproteinase with thrombospondin motifs 12)
            InterPro;
InterPro;
InterPro;
InterPro;
                                                              MIM; 60618
InterPro;
                                                                                                                                         use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADAMTS12
                                                                                         Genew;
                                                                                                      EMBL; AJ250725; CAC20419.1; -.
                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                 between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  340
                                                                                                                                                                              s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                   PIM:
                                                                                                                                                                                                                                DOMAINS.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 8 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                   {\tt DOMAIN}... THE SPACER DOMAIN AND THE TSP TYPE 1 DOMAINS FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX
                                                                                                                                                                                                                                                                                                                                                                                                                     matrix (By similarity).
TISSUE SPECIFICITY: Expressed exclusively in fetal lung.
                                                                                                                                                                                                                                                                                                                                                                                                          expressed in gastric carcinomas and
                                                                                                                                                                                                                                                                                    PTM: IS SUBJECTED TO AN INTRACELLULAR MATURATION PROCESS LEADIND TO A FRAGMENT CONTAINING THE N-TERMINAL REGION INCLUDING THE METALLOPROTEINASE, DISINTEGRIN-LIKE, CYS-RICH AND TS-1 DOMAINS AND THE C-TERMINAL FRAGMENT CONTAINING THE SPACER 2 AND THE FOUR TS-1
                                                                                                                                                                                                                                                                                                                                                       FOR A TIGHT INTERACTION WITH THE SIMILARITY).
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                                                                             606184;
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                                                                                         HGNC: 14605;
            IPR002870;
IPR001590;
IPR000884;
IPR000130;
                                                                                                                                                                                                                                                                                                                                          THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE
                                                              IPR001762; Disintegrin
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                                                                                         ADAMTS12
          Reprolysin.
TSP1.
Zn_MTpeptdse.
                                                 Pep_M12B_propep
                                                                                                                                                    Institute. There are no rest
utions as long as its content
is not removed. Usage by an
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                                                                                                                                                                                                                                                                                                                                                                                                          in cancer
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PROSITE; PS00427;
PROSITE; PS50092;
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QYDPTPLTWSKCSEEY ITRFLDRGWGFCLDDIPK
            GPGAHIL-RRKSPASGOGPMCNVKAPLGSPS
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TSP TYPE-1 3.
TSP TYPE-1 4.
SPACER 2.
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SIMILARITY).
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Q9H324;
Q9H324;
15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-10 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin mottifs 10) (ADAM-TS 10) (ADAM-TS10) (Fragment).
                                                                                                                                                                                                                                                                             Repeat;
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PROSITE;
PROSITE;
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pfam; PF01421; Reproly9in; 1.
pfam; PF01562; Pep_M12B_propep;
smarT; SM00209; TSP1; 5.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified and this statement is not removentities requires a license agreement (S or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "ADAM-TS10: a novel member of the ADAM-TS fami
thrombospondin type I repeats.";
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ
-1- CCFACTOR: BINDS I ZINC ION (BY SIMILARITY)
-1- SUBCELLULAR LOCATION: Secreted. Associated
                                                                                                                                                                                                                                                             PROPEP
                                                                                                                                                                                                                                                                                                                 Hydrolase;
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Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro: IPR001762; Disintegrin.
InterPro: IPR002870; Pep_M12B_propep.
InterPro: IPR001990; Reprolysin.
InterPro: IPR000884; TSP1.
InterPro: IPR000130; Zn_MTpeptdse.
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SIMILARITY: BELONGS TO PEPTIDASE FAMILY M1
SIMILARITY: CONTAINS 1 DISIMTEGRIN-LIKE DO
SIMILARITY: CONTAINS 5 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                matrix (By similarity).

DOMAIN: THE SPACER DOMAIN AND FOR A TIGHT INTERACTION WITH T
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                                                                                                                                                                                                                                                                                         PS50092; TSP1; 2.
PS50092; TSP1; 2.
PS00142; ZINC_PROTEASE; 1.
PS00427; DISINTEGRIN_1; FALSE_NEG.
PS00427; DISINTEGRIN_1; Glycoprotein;
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Primates;
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ZINC (CATALYT)
BY SIMILARITY
ZINC (CATALYT)
    TSP
TSP
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TSP
                                                                                                                                    ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
                                                                                                SPACER
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TYPE-1
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TYPE-1
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DOMAIN.
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SIMILARITY).
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Best Local S
Matches 136
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Q9UKPS;
Q9UKPS;
16-CCT-2001 (Rel. 40, Created)
16-CCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-6 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase
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                                                        Zinc Metalloproteases.";
J. Biol. Chem. 274:25555-25563(1999).
-i- COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
-i- SUBCELLULAR LOCATION: Secreted. Associated
                                                                                                                                                             Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                   HUMAN
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MATTIX (By similarity).
TISSUE SPECIFICITY: EXPRESSED AT LOW LEVELS I
DETECTABLE IN A NUMBER OF OTHER TISSUES.
DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1
FOR A TIGHT INTERACTION WITH THE EXTRACELLULA
                                                                                                                                                                                                                                                                                                                                               CLNNRP
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Pfam; PF01421; Reprolysin; 1.
Pfam; PF01562; Pep_M12B_propep; 1.
SMART; SM00209; TSP1; 1.
PROSITE; PS50215; ADAM_MEPRO; 1.
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Genew; HGNC:222; ADAMTS6.
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or send an email to license@isb-sib.ch).
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InterPro; IPR002870; Pep_M12B_propep.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000884; TSP1.
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                                           LDNCHYTGYLQDQRSTTKVALSNCVGLHGVIATEDEEYFIEPLKNTTEDSKHFSYENGHP
                                                                                   EPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSA-----GGP 176
                                                                                                                               RRRRSMDPIDPQQAVSKLFFKLSAYGKHFHLNLTLNTDFVSKHFTVEYWGKDGPQWKHDF 127
                                                                                                                                                                       ---GSGTP----ARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQ-APELLGGA 122
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oprotease; Zinc; Signal; Glycoprotein; Zymogen;
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29.6%;
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N-LINKED
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Pred. No. 8.1e-22;
3; Mismatches 153
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TSP TYPE-1
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-PASGQGPMCNVKAPLGSPSP----RPRRAKRF 213
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                    T--CDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHD 372
                                                                                                                                                                  ASLSRFVETLVVADDKMAAFHG-AGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVIL 272
                                                                                                           GSGEEGPQVGPSAAQTLRSFCAWQRGL-----NTPEDSDPDHFDTAILFTRQDLCGVS
                                                                                                                                               VSIERFVETLVVADKMMVGYHGRKDIEHYILSVMNIVAKLYRDSSLGNVVNIIVARLIVL
                                                                                                                                                                                                                       --HVIYKKSALQQRHLYDHSHCGVSDFTRSGKPWWLNDTSTVSYSLPINNTHIHHRQKRS 245
                                                                       TEDQPNLEINHADKSLDSFCKWQKSILSHQSDGNTIPENGIAHDNAVLITRYDICTYK 365
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Search completed: April 21, 2003, 14:45:26 Job time : 22.2332 secs

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708.413 Million cell updates/sec
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; GENERAL TAYORMATION: ; TAPILICANT: Bristol-Myers Squibb Company TITLE OF INVENTION: AGGRECAN DEGRADING METALLO PROTEASES FILE REFRENCE: DM6909 CURRENT APPLICATION NUMBER: US/09/122,126B CUBRENT FILING DATE: 1998-07-24 CUBRENT APPLICATION NUMBER: US/09/122,126B CUBRENT FILING DATE: 1998-07-24 NUMBER OF SEO ID NOS: 21 SOFTHARE: PATCHIL VETSION 3.0 SEO ID NO. 27 CORGANISM: Homo sapiens US-09-122-126B-2 QUETY MATCH HOST SIMILATILY 98.9%: PFEd. No. 3.66-729; HASTOSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLASILPSARLASPLPREEE 60 OY 1 NSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLASILPSARLASPLPREEE 60 INSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLASILPSARLASPLPREEE 60 OY 1 NSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLLASILPSARLASPLPREEE 60 OY 1 NSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLLASILPSARLASPLPREEE 60 OY 1 NSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLLASILPSARLASPLPREEE 60 OY 1 NSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLLLLASILPSARLASPLPREEE 60 OY 1 NSOTGSHPORGLAGRNILMGAOPCLLLPIVPLSMLVMLLLELEDDSGVQVBGLTVQYLGOAPELLG 120 OY 1 1 IVFPEKLNGSVLPGSGFPARLLCRLQAFGETLLLELEDDSGVQVBGLTVQYLGOAPELLG 120 OY 1 1 IVFPEKLNGSVLPGSGFPARLLCRLQAFGETLLLELEDDSGVQVBGLTVQYLGOAPELLG 120 OY 1 2 GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHIQPLBGGFPNSAGGPGAHI 180 OY 1 2 GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHIQPLBGGFPNSAGGPGAHI 180 OY 1 1 LRRKSPASGQGPMCNVKAPLGSPSPAPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKR 240 OY 1 2 GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHIQPLBGGFPNSAGGPGAHI 180 OY 1 2 GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHIQPLBGGTPNSAGGPGAHI 180 OY 1 2 GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHIJHIJHIJHIJHIJHIJHIJHIJHIJHIJHIJHIJHIJH	28 200 8.4 621 4 US-09-026-001A-6 29 197.5 8.3 616 4 US-09-608-790-1 30 192.5 8.1 855 4 US-09-818-819-2 31 192.5 8.1 855 4 US-09-918-819-2 32 187 7.9 814 4 US-09-920-048-2 33 187 7.9 814 4 US-09-920-048-3 34 186.5 7.9 551 4 US-09-920-048-4 35 181.5 7.7 335 4 US-09-130-491-16 36 179 7.6 462 4 US-09-152-060-64 37 178 7.5 529 2 US-08-36-442-3 38 177.5 7.5 769 1 US-08-243-442-4 40 177.5 7.5 769 1 US-08-447-35-4 41 169.5 7.2 751 2 US-08-846-43-3 42 168 7.1 391 4 US-09-16-216-6 43 169 5 7.2 751 2 US-08-836-443-3 44 162 6.8 201 4 US-09-411-335-1 45 162 6.8 201 4 US-09-411-335-1 46 US-09-122-126B-2 3 Sequence 2, Appli 3 Sequence 2, Appli 4 Sequence 4, Appli 4 Sequence 4, Appli 5 Sequence 4, Appli 6 Sequence 4, Appli 7 Sequence 6, Appli 7 Sequence 7 Sequence 7 Sequence 7 Sequence 8, Appli 8 Sequence 9
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CURRENT APPLICATION NUMBER: US/09/130,491
CURRENT FILING DATE: 1998-08-07
EARLIER APPLICATION NUMBER: US 60/058,108
EARLIER FILING DATE: 1997-09-05
EARLIER APPLICATION NUMBER: US 60/054,961
EARLIER FILING DATE: 1997-08-06
NUMBER OF SEQ ID NOS: 16
SOFTMARE: FastSEQ for Windows Version 3.0
SEQ ID NO 2
LENGTH: 967
TYPE: PAT
ORGANISM: Homo sapiens
US-09-130-491-2
                                               US-09-369-364A-9
Sequence 9, Application US/09369364A
Patent No. 6391610
GENERAL INFORMATION:
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Best Local :
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              APPLICANT:
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APPLICANT: Goodearl, Andrew D.J.
TITLE OF INVENTION: TANGO-71, TANGO-73, TANGO-74, TANGO-76, AND TANGO-83
FILE REFERENCE: 09404/041001
 APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                   VADQSMAEFHGSGLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQKGPEVTSN
                                                                                                                                                                                                                                     CSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNG-VNQDSHMMASMLSNLDHSQPW
                                                                                                                                                                                                                                                                     CAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPW 404
                                                                                                                                                                                                                                                                                                                      AAQTLRSFCAMQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARS
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                             Apte, Suneel
Hirohata, Satoshi
               Hurskainen,
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               Tiina
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Query Match Best Local Similarity

27.9%;

Score 661; DB 4; Pred. No. 3.3e-56;

Length 930;

Matches

170;

Conservative

69;

Mismatches

Indels

92;

14;

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: TITLE OF INVENTION: Nucleic Acids Encoding Z1:
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 9
LENGTH: 905
TYPE: PRT
ORGANISM: Mus musculus ADAMTS-8
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US-09-369-364A-2
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                                                      SOFTWARE: Pa
SEQ ID NO 2
LENGTH: 930
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Best Local Similarity
Matches 192; Conserv
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                                                                                                           APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirokata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
                TYPE: PRT
ORGANISM: mus
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230 VSEARFVETLLVADASMAAFYGTDLQNHILTVMSMAARIYKHPSIRNSVNLVVVKVLIVE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADVGTICDPDKSCSVIKDEGLQAAYTLAHELGHVLSMPHDDSKPCVRLFGPMG-KYHMMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KERWGPEVSDNGGLTLRNFCSWQRRFNKPSDRHPEHYDTAILFTRQNFCGKGEQCDTLGM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LPQGLEWEVEMGNGQGQERSDNEEDKKQDKEGLLKETEDSRKVPPPFGSKT----RSKRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGWSGSFLLA----GEEFTIQPQGAGDSLDQPHRLQRWGPGQ---RREDPGLAAAEVFP 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --WDGGALLGVLQYRGAELHLQPLEGG----TPN--SAGGPGAHILRRKSP-----
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                                                                                               PatentIn
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                musculus ADAMTS-5
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41.2%;
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NUMBER OF SEQ ID NOS: 21
SOFTWARE: PatentIn version 3.0
SEQ ID NO 15
LENGTH: 930
TYPE: PRT
ORGANISM: Homo sapiens
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US-09-122-126B-15
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                             Matches 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/122,126B CURRENT FILING DATE: 1998-07-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Bristol-Myers Squibb Company TITLE OF INVENTION: AGGRECAN DEGRADING | FILE REFERENCE: DM6909
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                                                                                  ELLGGAEP--
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                                                                                                                    PLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGF ------ VP 115
                                                                                                                                                     PARLICR------LQAFGETLILELEQDSGVQVEGLTVQYLGQAP 116
                                                                                                                                                                                       LGWASLLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEVQERAEPPGHPH 62
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                                                                                                                                                                                                                                                                          27.5%;
33.7%;
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Pred. No. 2.9e-55;
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RESULT 7 US-09-369-364A-13

Sequence 13, Application US/09369364A Patent No. 6391610

GENERAL INFORMATION:
APPLICANT: Apte, S
APPLICANT: Hurskai
Applicant: Hirohat

Apte, Suneel Hurskainen, Tiina L. Hirohata, Satoshi

APPLICANT: TITLE OF I

INVENTION:

Nucleic Acids Encoding Zinc Metalloproteases

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US-09-369-364A-11
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SEQ ID NO 11
LENGTH: 245
TYPE: PRT
ORGANISM: Homo sapiens ADAMTS-8
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Matches
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APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ. ID NOS: 31
                                                                                                                                                                                                                                                                                               Query Match
                                  378
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187 TRLFGPMG-KHHVMAPLFVHLNQTLPWSPCSAMF 219
                                                                                                                                                                                                                              199 PLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSI 258
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                                                                                                                                                                                             11 PLGATS----RTKREVSEAREVETLLVADASMAAFYGADLQNHILTLMSVAARIYKHPSI 66
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                                                               GNCLLDLPRKQILGPEELP
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                                                                                                                                KNSINLMYVKYLIVEDEKWGPEVSDNGGLTLRNFCNWQRRFNQPSDRHPEHYDTAILLTR
                                                                                                                                                             RNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTR 318
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                              ISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARF 411
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APPLICANT: HOLIZIMAN, Douglas A.
APPLICANT: HOLIZIMAN, Douglas A.
APPLICANT: Goodearl, Andrew D.J.
TITLE OF INVENTION: TANGO-71, TANGO-73, TANGO-74, TANFILE REFERENCE: 09404/041001
CURRENT APPLICATION NUMBER: US/09/130,491
CURRENT FILING DATE: 1998-08-07
EARLIER APPLICATION NUMBER: US 60/058,108
EARLIER FILING DATE: 1997-09-05
EARLIER FILING DATE: 1997-09-05
EARLIER FILING DATE: 1997-08-06
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 13
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US-09-130-491-13
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CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 13
LENGTH: 1882
                                                                                                                                                                                                                                                                                              Sequence 13, Application US/09130491 Patent No. 6416974
                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
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Best Local
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LOCATION: (468)
OTHER INFORMATION: Xaa = C
NAME/KEY: MOD_RES
LOCATION: (521)
OTHER INFORMATION: Xaa = Y
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                                                                                                                                                                                                                                                                                                                                                                                                                  398 --KEEGVKSPQHVMAPTLNEYTNPWMWSKCSRKYITEFLDTGYGECLLNEPESRPYPLPV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GNLINIVIVNLIVIHNEODGPSISFNAOTTLKNFCOWOHS-NSPGGI---HHDTAVLLTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTR 318
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QVEGLTVQYLGQAPELLGGAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHL 162
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          ISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEA-PLHLPV 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QPLLRNEHKNRHSKD------KKKTRARKWGERINLAGDVAALNSGLATEAFSAYGNKT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    169;
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                                                                                                                                                                                                             TANGO-76,
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                                                                                                                                                                                                             AND TANGO-83
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APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Met
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION UNMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 15
LENGTH: 874
TYPE: PRT
ORGANISH: Mus musculus ADAMTS-9
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US-09-130-491-13
                                                                                                                                                                                       RESULT 10
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                                                                                                       GENERAL INFORMATION:
                                                                                                               bequence 7, Application US/09369364A Patent No. 6391610
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Best Local
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Best Local
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APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
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                                                                               APPLICANT: Apte, Suneel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269 LVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCD 328
                                                                                                                                                                                                                                                                                   387 SRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEA-----PLHLP 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 HMMASMLSNLDHSQPWSPCSAYMITSFLDNGHGECLMDKPQNPIQLP--GD 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Y Match 25.3%;
Local Similarity 61.4%;
hes 105; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 ILVIHDEQKGPEVTSNAALTLRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDLCGSQTCD 63
                                                                                                                                                                                                                                                                                                                                                  CDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLST
                                                                                                                                                                                                                                                                                                                                                                                                         NLVVIHNEQEGPYINFNAQTTLKNFCQWQHSKNY---LGGTQHDTAVLVTREDICRAQDK 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLC-GVST 326
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                                                                                                                                                                                                                                                 PQHVMAPTLNFYTNPWMWSKCSRKYITEFLDTGYGECLLNEPASRTYPLPSQLP 350
                                                                                                                                                                                                                                                                                                                               CDTLGLAELGTICDPYRSCSISEDSGLSTAFTIAHELGHVFNMPHDDSNKC--KEEGVKS
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Pred. No. 1.6e-50;
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                       Zinc Metalloproteases
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; LENGTH: 997
; TYPE: PRT
; ORGANISM: Homo sapiens ADAMTS-7
US-09-369-364A-7
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US-09-369-364A-5
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                                                     NAME/KEY: MOD_RES
LOCATION: (450)
OTHER INFORMATION: Xaa
US-09-369-364A-5
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SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 7
                                                                                                                                            NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 5
LENGTH: 859
TYPE: PRT
ORGANISM: Homo sapiens ADAMTS-6
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Best Local Similarity
Matches 154; Conserv
                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/09369364A Patent No. 6391610
                 Query Match
 Best Local Similarity
                                                                                                                                                                                                                                                     APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
                                                                                                                              FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLLLLCALAPGAPGPAPGRATEGRAALDIVHPVRVDAGGSFLSYELWPRALRKRDVSVRR 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAPLTWSRCSRQYITRFLDRGWGLCLDDPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DPEEPWSPCSARFITDFLDNGYGHCLLDKP 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QPHRSCSINEDTGLPLAFTVAHELGHSFGIQHDGSGNDC----EPVGKRPFIMSPQLLYD 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVST--CDTLGMADVGTVC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KSPA-----SGQGPMCNVKAPLGSPS------PRPRRA-KRFASLSRFVET 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q-DPE-----LEGGLAAISACDGLKGVFQLSNEDYFIEPLD-SAPARPGHAQPHVVYKR 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DAPAFYELQYRGRELRFNLTANQHLLAPGFVSETRRRGGLGRAH--IRAHTPACHLLGEV 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----LQAFGETLLLELEQDSGVQVEGLTVQY-----LGQAPELLGGAEPGTYLTGTI 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNS-KPCISLNGPLSTSRHVMAPVMAHV
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16.9%;
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Score 401; DB 4; Pred. No. 1.3e-30;
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; TYPE: PRT
; ORGANISM: homo sapiens
US-09-930-872-4
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US-09-930-872-4
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Friddle, Carl Johan
APPLICANT: Hilbun, Erin
TITLE OF INVENTION: NO. 6448388e1 Human Proteases
FILE REFERENCE: LEX-0219-USA
CURRENT APPLICATION NUMBER: US/09/930,872
CURRENT FILING DATE: 2001-08-14
PRIOR APPLICATION NUMBER: US 60/225,852
PRIOR FILING DATE: 2000-08-16
NUMBER OF SEQ ID NOS: 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---GSGTP-----ARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQ-APELLGGA 122
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 NVKAPLGSPS---
                                   PLPSHLSWKLGRAAQGSSP-----SHVLYKRSTEPHAPGASEVLVTSRTWELAHQPLH 234
                                                                       PELLGGAEPGT------YLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQ 163
                                                                                                                                                                                YVSHEIMHHQRRRRAVAVSEVESLHL--RLKGSRHDFHVDLRTSSSLVAPGFIVQTLGKT 131
                                                                                                                                                                                                                    -- EEEIVFPEKLNGSVLPGSGTPARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQA 115
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                                                                                                          ------GTKSVQTLPPEDFCFYQGSLRSHRNSSVALSTCQG-LSGMIRTEEADYFLR 181
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Pred. No. 8.2e-29;
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US-09-491-522-7
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                                                                                                                                                                                TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 566 amino acids
TYPE: amino acid
                                                                   Query Match
Best Local Similarity
Matches 139; Conserv
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                                                                                                                                                                                                                                                                                        NAME: Abrams, Samuel B
REGISTARION NUMBER: 30,605
REFERENCE/DOCKET NUMBER: 831
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650.493-4935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: RETITLE OF INVENTION: AN NUMBER OF SEQUENCES: 1 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FASTSEQ for Windows Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
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APPLICANT: Prockop, Darwin J.
TITLE OF INVENTION: RECOMBINANT N-PROTEINASE,
                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
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                               PGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLLASLLP-----SARLAS------ 54
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1155 Avenue of the Americas
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                                                                                 Score 364.5; DB 4;
Pred. No. 2.7e-27;
                                                                   Mismatches
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Best Local Similarity 2/...
114; Conservative
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SOFTWARE: FastSEQ for
SEQ ID NO 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/930,872
CURRENT FILING DATE: 2001-08-14
PRIOR APPLICATION NUMBER: US 60/225,852
PRIOR FILING DATE: 2000-08-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: No. 6448388el Human Proteases and Polynucleotides Encoding the FILE REFERENCE: LEX-0219-USA
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TYPE: PRT
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                                                    VLYKRSTEPHAPGASEVLVTSRTWELAHQPLHSSDLRLGLPQKQHFCGRRKKYMPQPPKE
                                                                                       ILRRKS-----PASGQ------GPMCNVKAPLGSPS------PRPRRA 210
                                                                                                                                                            INGDPESVASLHWDGGALLGVLQYRGAELHLQPL------EGGTPNSAGGPGAH 179
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                                                                                                                        LRSHRNSSVALSTCQG-LSGMIRTEEADYFLRPLPSHLSWKLGRAAQGSSP----SH
                                                                                                                                                                                               RLKGSRHDFHVDLRTSSSLVAPGFIVQTLGKT-----GTKSVQTLPPEDFCFYQGS 150
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DDKMAAFHG-AGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGP--QVGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----PPLGGPQALDTGASLDSLDSLSRALGVLEEHANSSRRRARRHAADDDYNIEVLLGV
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                ----ASLSRF-----VETLVVADDKMAAFHG-AGLKRYLLTVMAAA
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27.8%;
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                                                                                                                                                                                                                                                                                      Score 361; DB 4; Length 491; Pred. No. 4.7e-27;
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139;
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263 DLFILPDEYKSCLRHKRSLLRSHRNEELNVETLVVVDKKMMQNHGHENITTYVLTILNMV

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RESULT 15
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                                                                                                                                      Query Match
Best Local Similarity
Matches 139; Conserv
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ZIP: 1036-2811
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
MEDIUM TYPE: IBM Compatible
TYPHTER: TAMEM: Windows
11ndc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Prockop, I
TITLE OF INVENTION: I
TITLE OF INVENTION: I
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 30,605
REFERENCE/FOCKET NUMBER: 83
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-493-4935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 2.0b CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/491,522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie & Edmonds, LLP
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
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STRANDEDNESS: si
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                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Abrams, Samuel REGISTRATION NUMBER:
                                                                                                                                                                                                                               TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: New York
                                                                                                                                                                                                                                                                                  LENGTH:
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LGHGAERILAVPVRTDAQGRLVSHVVSAATSRAGVRARRAAPVRTPSFPGGNEEEPGSHL 109
                                   LPREEE - - - - -
                                                                                                     PGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLASLLP-----SARLAS------ 54
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Lapiere, Charles M.
Prockop, Darwin J.
PECOMBINANT N-PROTEINASE,
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                                                                                                                                          Conservative
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                                                                                                                                      63;
                                 Score 358.5; DB 4;
Pred. No. 3.3e-26;
53; Mismatches 183;
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                                                                    LLLLLPPPLLPPPPPPPANARLAAAADPPGGP 49
                                                                                                                                                                         Length 1211;
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Search completed: April 21, Job time: 24.5655 secs
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                                                                                   447 HWSRCSQQELSRYL-HSY-DCLLDDPFA 472
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                                                                                                                         PWSPCSARFITDFLDNGYGHCLLDKPEA 430
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                                                                                                                                                                                                                                                                                                                                    DDSVVQFHGKEHVQKYLLTLMNIVNEIYHDESLGAHINVVLVRIILLSYGKSMSLIEIG-
                                                                                                                                                                  SCTLNHEDGESSAFVVAHETGHVLGMEHDGQGNRC----GDEVRLGSIMAPLVQAAFHRF 446
                                                                                                                                                                                                      SCATVEDDGLQSAFTAAHELGHVFNMLHD-NSKPCISLNGPLSTSRHVMAPVMAHVDPEE
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq
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                                              and is derived by analysis of the total score distribution
                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.
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1: /SIDSZ/gcgdatta/g
2: /SIDSZ/gcgdatta/g
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length: 2000000000
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Gapop 10.0 , Gapext 0.5
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ALIGNMENTS

RESULT 1

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The invention relates to a DNA acting as a promoter controlling the
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                                                                                                           Disclosure; Page 9-11; 12pp; Japanese
                                                                                                                                                                                                                                        New DNA for use as a promoter for controlling aggrecanase-1 \,
                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-610072/70.
N-PSDB; AAI68146.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human aggrecanase-1 SEQ ID NO 3.
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                                                                                                                                                                                                                                                                                                       expression
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Result

Score

Match

Length

DB ID

Description

Human aggrecanase-

AAG78228

2318 2318 2313 2306 2306 2306 2306 1125 979 969.5

97 97 97 97 97 97 97 97 97 97 97 97

AAB21256 AAW75425 AAY99429 AAU29199 AAB66178 AAM48394 AAB21265 AAY53899

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Rat aggrecanase.

AAY49501

Mouse metalloprote Amino acid sequenc Human METH1 protei

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Best Local
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Ç
              Kelner GS,
                                                                                                                                                                                      a disintegrin and metalloproteinase domain: thrombospondin domai vaccine; nootropic; neuroprotective; antiparkinsonian; cerebroprotective; cytostatic; antiarthritic; immunosuppressive; Aliheimer's disease; Parkinson's disease; stroke; cancer; arthri
                                                           08-MAR-1999;
                                                                                                                                                                                                                                                           Human metalloproteinase KIAA0688.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expression of aggrecanase-1 (ADAMTS4) resulting in antiarthritic activity. The DNA is used in a method for screening a compound affecting the expression control of the aggrecanase-1 gene.
                                    (NEUR-) NEUROCRINE BIOSCIENCES
                                                                                  08-MAR-2000; 2000WO-US06237
                                                                                                         14-SEP-2000
                                                                                                                                 WO200053774-A2
                                                                                                                                                        Homo
                                                                                                                                                                              autoimmune disease;
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                                                                                                                                                                                                                                      KIAA0688; metalloproteinase;
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              Clark M,
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99.1%;
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Pred. No. 3
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3.2e-198;
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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  metalloproteinase domains. ADAMTS polypeptides are useful for the manufacture of medicaments for treating conditions associated with neuroinflammation and/or neurodegeneration, such as Alzheimer's disparkinson's disease and stroke. They are also useful for treating conditions associated with cell proliferation, cell migration, inflammation and/or anglogenesis, such as concer, arthritis and autoimmune diseases. They can be used to treat patients afflicted invasive tumour, a brain tumour or brain injury.
                                                                                                                   AAW75425 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is human metalloproteinase KIAA0688 KIAA068 was identified by as a member of the ADAMTS family of proteins by searching Genbank for sequences similar to ADAMTS-1 and ADAMTS. ADAMTS family of proteins contain thrombospondin, integrin and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polynucleotide encoding novel members of a disintegrin, metalloproteinase and thrombospondin domain protein family used to prevent and treat Alzheimer's disease, cancer and autoimmune disease
                             Human aggrecan
                                                           30-MAR-1999
                                                                                        AAW75425;
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)B; AAA95826.
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440; Conserv
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                            degrading metalloprotease
                                                                                                                   Protein;
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99.1%;
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Pred. No. 3.2e-198;
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cartilage;
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                                                                                                                                                                                                                                                                                                                                            This sequence represents the human aggrecan degrading metalloprotease 1 (ADMP-1). ADMP-1 and ADMP-2 (AAR75426) are novel proteases that cleave the aggrecan (a major cartilage proteoglycan) between residues consistent of the interglobular domain (compared with cleavage between Asn341-phe342 by the matrix metalloproteases MMP-1, -2, -3, -7, -8, -9 and -13). ADMP-1 and ADMP-2 were isolated and purified from the conditioned media of bovine nasal cartilage stimulated by interleukin-1beta. The purified proteins were partially sequenced and primers were synthesised based on the resultant amino acid sequences (AAX00727-X00732 for ADMP-1 and AAX00733-X00736 for ADMP-2). These were used to isolate the corresponding genes from cDNA. The ADMP polypeptides can be used for identifying inhibitors of ADMP activity which would prevent cleavage of the aggrecan core protein, thereby decreasing the loss of aggrecan from cartilage. Such inhibitors can be used for treating diseases such as osteoarthritis, joint injury, reactive arthritis, acute pyrophosphate arthritis.
                                                                                                                                                                                                                                                           Query Match 97.6%;
Best Local Similarity 98.9%;
Matches 439; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arner EC,
Pratta M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-OCT-1997;
25-JUL-1997;
15-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated aggrecan degrading metallo proteases - used to develop products for treating, e.g. osteoarthritis, joint injury, reactive arthritis, psoriatic arthritis or juvenile rheumatoid arthritis
                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 25; Page 61-62; 73pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            interglobular domain; matrix metalloprotease; bovine; interleukin-lbeta;
primer; PCR; amplification; inhibitor; cleavage; inhibitor; ADMP;
                                                                                                                                                                                                                                                                                                                                        rheumatoid arthritis.
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            241 YLLTYMAAAAKAFKHPSIRNPYSLYVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN 300
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                                                               LRRKSPASGQGPMCNVKAPLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKR 240
                                                                                                                 GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI 180
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                                                                                                     GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI 180
YLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN
                                                   LRRKSPASGQGPMCNVKAPLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKR
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A, Tortorella MD, Trzaskos JM,
                                                                                                                                                                                                                                                         Score 2313; DB 20;
Pred. No. 8.8e-198;
0; Mismatches 5;
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980S-0100711
980S-0100919
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98US-0100627
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3-0099741.
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screening. diagnosis;

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PR 23-SEP-1998; 98US-0101471.
PR 23-SEP-1998; 98US-0101472.
PR 23-SEP-1998; 98US-0101474.
PR 23-SEP-1998; 98US-0101475.
PR 23-SEP-1998; 98US-0101475.
PR 23-SEP-1998; 98US-0101475.
PR 23-SEP-1998; 98US-0101477.
PR 23-SEP-1998; 98US-0101741.
PR 24-SEP-1998; 98US-0100240.
PR 23-SEP-1998; 98US-0100240.
PR 23-SEP-1998; 98US-0100240.
PR 23-SEP-1998; 98US-0100240.
PR 23-SEP-1998; 98US-0100230.
PR 23-SEP-1998; 98US-0100240.
PR 23-SEP-1998; 98US-0100250.
PR 23-SEP-1998; 98US-010030.
PR 23-SE
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Query Match
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18-NOV-1998
                                                  AAA37022 to AAA37144 encode the new isolated human transmembrane, receptor or secreted PRO polypeptides given in AAY99340 to AAY99462. The transmembrane and receptor PRO proteins can be used for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions. The polypeptides and nucleotide sequences encoding then have various industrial applications, including uses as pharmaceutical and diagnostic agents. AAA37145 to AAA37330 represent PCR primers and hybridisation probes used in the isolation of the PRO polypeptides from the present invention.
                                                                                                                                                                                                         New mammalian DNA sequences encoding transmembrane, receptor or secreted PRO polypeptides, useful for screening of potential peptide osmall molecule inhibitors of the relevant receptor/ligand interactions
                            Sequence
                                                                                                                                                                                    Claim
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)B; AAA37111.
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98US-0108850.

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Length
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GHCLLDKPEAPLHLPVTGDYKDDD

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361

HELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGY

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RESULT 5
AAU29199
ID AAU2129
XX AAU2
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XX PRO
DT 18-D
DX HUMMA
XX PRO
COS HOMO
KW 6097
FF 28-F
PR 721-1

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06-MAR-2000;
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02-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRO polypeptide; mammal; tumour; cancer; human; cattle; horse;
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J, Smith V,
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2000US-198121P.
2000US-198121P.
2000US-198585P.
2000US-199597P.
2000US-199559P.
2000US-199554P.
2000US-201516P.
2000WO-US1705.
2000WO-US1705.
2000WO-US14042.
2000WO-US14042.
2000WO-US15264.
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2000US-193032P.
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2000WS-USB8439.
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2000US-191314P
acids encoding PRO polypeptides, used to diagnose
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stanabe CK,
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ng Z;
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RESULT 6 AAB66178

standard;

protein; 837

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02-APR-2001 AAB66178; AAB66178

(first entry)

Secreted; transmembrane; gene therapy.

Protein of the invention #90

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Matches 438
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        susceptibility to tumour development, particularly adrenal, lung, colon, breast, prostate, rectal, cervical, or liver tumours, in mammalian subjects. The oligonucleotide probes specific for the PRO nucleic acids can be used for genetic analysis of individuals with genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             expression in the test sample indicates the presence of a tumour in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The PRO polypeptides and their associated nucleic acids can be used detect the presence of a tumour in a mammal by comparing the level expression of a PRO polypeptide in a test sample of cells from the and a control sample of normal cells, whereby a higher level of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequences AAU29024-AAU29328 represent PRO polypeptides of the invention The PRO polypeptides and their associated nucleic acids can be used to
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421
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                   GHCLLDKPEAPLHLPVTGDYKDDD 444
                                                             TPEDSGPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAA
                                                                                                                                                TPEDSDPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAA
                                                                                                                                                                                                                YLLTVMAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN
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GHCLLDKPEAPLHLPVTFPGKDYD 444
                                                                               HELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGY
                                                                                                                                                                                                  YLLTYMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN
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98.6%; Pred. No. 3.7e-197;
tive 0; Mismatches 6;
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level of
the animal
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20-JUL-1999
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01-SEP-1999
01-SEP-1999
29-OCT-1999
02-DEC-1999
16-DEC-1999
16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to secreted and transmembrane proteins. These proteins and the DNA encoding them may be used as hybridization probes, in chromosome and gene mapping and in the generation of anti-sense RNA and DNA. They may also be used used to generate either transgenic animals or knockout animals which are in turn useful for development and screening of therapeutically useful reagents. The nucleic acids may also be used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Secreted and transmembrane proteins and nucleic acids designated PRO, useful as hybridization probes; in chromosome and gene mapping and gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Fig 180;
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Gao W, Goddard A, Godowski PJ,
Pan J, Paconi NF, Roy MA, Smith
Watanabe CK, Williams PM, Wood
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361 HELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGY 420
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                                                                                                                                               LRRKSPASGQGPMCNVKAPLGSPSPRPRRAKRFASLSRFVETLYVADDKMAAFHGAGLKR
                                                                                                                                                                                  GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI 180
                                                                                                                                                                                                    GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI 180
                                                                                                                                                                                                                                     IVFPEKLNGSVLPGSGTPARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQAPELLG 120
                                                                                           YLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN 300
                                                                                                                                LRRKSPASGOGPMCNVKAPLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKR 240
                        TPEDSGPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAA
                                                                           YLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN
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; 2000WO-US00219.
; 2000WO-US00376.
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99WO-US20111.
99US-0162506.
99WO-US28313.
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                                                                                                                                                                                                                                                                                                                                                          97.3%;
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owski PJ, Grimaldi CJ, GI
MA, Smith V, Stewart TA,
PM, Wood WI;
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Pred. No. 3.7e-197;
0; Mismatches 6;
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Gurney AL,
TA, Tumas D;
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                                                                                                                                                                                                                                                                                                                                                                                   A new gene, exhibiting aggrecanase activity, induced by a beta-amyloid protein, is useful in the preparation of drugs to treat Alzheimer's disease.
                                                                                                                                                                                                                                                                                                              The present sequence is a protein with aggrecanase activity. This sequence is rat-derived. The coding sequence for this protein can in the preparation of drugs to treat Alzheimer's disease.
                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 12-13; 18pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-191859/25.
N-PSDB; ABA98676.
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                                                                                                                                                            GSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCDTLGM 332
                                                        PVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEAPLHLPVTGDYKDDD
                                                                                                    AGVGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCANLNGQGSSSRHVMA
                                                                                                                ADVGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMA 392
                                                                                                                                                   GSGQEVPQVGPSAAQTLRSFCTWQKGLNPPNDSDPDHFDTAILFTRQDLCGVSTCDALGM 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GHCLLDKPEAPLHLPVTGDYKDDD 444
                                                                                                                                                                                               FASLSRFVETLYVADDKMAAFHGAGLKHYLLTVMAAAAKAFKHPSIRNPVNLVVTRLVIL
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                                                                                                                                                                                                                                             al Similarity
213; Conser
                                                                                                                                                                                                                                                                                           625 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nootropic; neuroprotective; rat; Alzheimer's
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91.8%;
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Pred. No. 1.1e-91
5; Mismatches 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is mouse metalloproteinase ADAMTS-1. The ADAMTS family of proteins is closely related to the ADAM (A Disintegrin and Metalloproteinase Domain) family. Members of the ADAMTS family contain a thrombospondin domain in addition to the disintegrin and metalloproteinase domains found in the ADAMS. ADAMTS polypeptides are useful for the manufacture of medicaments for treating conditions associated with neuroinflammation and/or neurodegeneration, such as Alzheimer's disease, Parkinson's disease and stroke. They are also useful for treating conditions associated with cell proliferation, cell migration, inflammation and/or angiogenesis, such as cancer, arthritis and autoimmune diseases. They can be used to treat patients afflicted with an invasive tumour, a brain tumour or brain injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polynucleotide encoding novel members of a disintegrin, metalloproteinase and thrombospondin domain protein family used to prevent and treat Alzheimer's disease, cancer and autoimmune diseases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cerebroprotective; cytostatic; antiarthritic; immunosuppressive; Alzheimer's disease; Parkinson's disease; stroke; cancer; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a disintegrin and metalloproteinase domain; thrombospondin domain; vaccine; nootropic; neuroprotective; antiparkinsonian;
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MLVADQSMADFHGSGLKHYLLTLFSVAARFYKHPSIRNSISLVVVKILVIYEEQKGPEVT
                LVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVG 282
                                                                                                                                                                                                                                       LLLELEQDSGVQVEGLTVQYLGQAPELLGGAE------PGTYLTGTINGDPESVAS 141
                                                                                                                                                                                                                                                                                                            LLLLLLAS--LLPSARLA--SPLPREEEIVFPEKLNGSVLPG-SGTPARLLCRLQAFGET 91
                                                                                                                                                                                                                                                                             MLLLLLASITMLLCARGAHGRPTEEDEELVLPSLERA---PGHDSTTTRL--RLDAFGQQ 72
                                                                    AKCGVMDDETLPTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSSPRYVET
                                                                                                                                      LSLCEG-VRGAFYLQGEEFFIQPAPGVATERLAPAVPEEESSARPQFHILRRRRRGSG-G
                                                                                                                                                                                                          LHLKLQPDSGFLAPGFTLQTVGRSP----GSEAQHLDPTGDLAHCFYSGTVNGDPGSAAA 128
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                                                                                                                                                                        LHWDGGALLGVLQYRGAELHLQPLEG-----GTP--NSAGGPGAHILRRKSPASGQG 191
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                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                       896
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46.8%;
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                                                                                                                                                                                                                                                                                                                                                                 Score 979; DB 21; Pred. No. 2.1e-78;
                                                                                                     -KAPLGSPSPRPR-----
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                                                                                The present sequence represents a murine ADAMTS-1 protein. ADAMTS-1 is can metalloproteinsse. The specification describes another related metalloprotease, a C. elegans GON-1 protein, that lacks a transmembrane domain and possesses a predicted metalloprotease domain between residues (269-456. In C. elegans hermaphrodites, GON-1 is required for migration of two distal tip cells to produce elongated tubes, whereas in males, GON-1 is required for migration of a single linker cell to produce a single cell to grouter for migration of a single linker cell to produce a single comparted tube. The protein is used in the method of the invention. The specification describes a method for identifying a modulator of a protein that contains a metalloproteinase domain and a thrombospondin compound, and determining any change in migration or shape of the cell attributable to the test compound. The compounds identified are potential therapeutic modulators of abnormal cell migration and organ shaping, e.g. for rendering animals (specifically nematodes) sterile
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 1C; 60pp; English
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13-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Identifying modulators of proteins containing metalloprotease a thrombospondin domains, potentially useful for controlling cell
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                                                             for inhibiting cancer metastases.
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950 AA;
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99US-0129023
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Best Local Similarity Matches 211; Conserv

Conservative

68;

Score 969.5; D Pred. No. 1.6e-B; Mismatches

DB 21;

Indels Length 950;

67;

15;

46.6%;

Query Match

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RESULT 10
AAY49501
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                                                                                                                                                                                                                                                                                                              Human; METH1; METH2; anti-anglogenic; metalloprotease thrombospondin; cancer; diagnosis; hyperproliferative disorder; autoimmune disease; anglogenesis inhibitor; abnormal healing; inflammation; rheumatoid arthritis; psoriasis; endometrial bleeding disorder; diabetic retinopathy; macula degeneration; haemangloma; detection; arterial-venous malformation; immune deficiency.
New isolated metalloprotease thrombospondin polypeptides, use treating hyperproliferative disorders, cancers or autoimmune
                                        N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                            Human METH1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                      10-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY49501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY49501 standard;
                                        WPI; 1999-590684/50
N-PSDB; AAZ32000.
                                                                                                         (IRUE/) IRUELA-ARISPE L.
(HAST/) HASTINGS G A.
(RUBE/) RUBEN S M.
                                                                                                                                                                23-JAN-1998;
28-AUG-1998;
                                                                                                                                                                                                                                                                                      Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PWSPCSAYMVTSFLDNGHGECLMDKPQNPIKLP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEE 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPA 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AKCGVMDDETLPTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSSPRYVET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSLCEG-VRGAFYLQGEEFFIQPAPGVATERLAPAVPEEESSARPQFHILRRRRRGSG-G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MLLLLLASITMLLCARGAHGRPTEEDEELVLPSLERA---PGHDSTTTRL--RLDAFGQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLLLLLAS--LLPSARLA--SPLPREEEIVFPEKLNGSVLPG-SGTPARLLCRLQAFGET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RSCSVIEDDG-QAAFTTAHELGHVFNMPHDDAKHCASLNG-VSGDSHLMASMLSSLDHSQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MLVADQSMADFHGSGLKHYLLTLFSVAARFYKHPSIRNSISLVVVKILVIYEEQKGPEVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PMCNV-----RAKRFASLSRFVET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHWDGGALLGVLQYRGAELHLQPLEG-----GTP--NSAGGPGAHILRRKSPASGQG
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98US-0098539
                                                                                                                                                                                                        99WO-US01313
                                                                                 Hastings
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               useful
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RESULT 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     metalloprotease thrombospondin (METH) proteins METH1 and METH2

Crespectively. METH1 and METH2 have been found to be potent inhibitors of

angiogenesis both in vitro and in vivo. They can be used for treating

cancer and other disorders related to angiogenesis including abnormal

cwound healing, inflammation, rheumatoid arthritis, psorlasis,

cc endometrial bleeding disorders, diabetic retinopathy, some forms of

macula degeneration, haemangiomas, and arterial-venous malformations.

They may be useful in treating deficiencies or disorders of the immune

cc system, by activating or inhibiting the proliferation, differentiation,

cc mobilisation (chemotaxis) of immune cells. The etiology of these

cc immune deficiencies or disorders may be genetic, somatic, such as

cc cancer or some autoimmune disorders, acquired (e.g. by chemotherapy or

cc conditions, both chronic and acute conditions. The products can also be

used for detection and diagnosis. AAZ32002 to AAZ32080, and AAY49503 to

AAY49511 represent sequences given in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
   Human; MDTS4;
                                      Human ADAM-type metalloprotease MDTS4, SEQ ID NO:4.
                                                                          07-AUG-2001
                                                                                                                                                AAB73549 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ32000 and AAZ32001 encode, and AAY49501 and AAY49502 represent, human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37 LLLLLLASLLPSARLASPLPREEEIVFPEKLNGSVLPGSGTPARLLCRLQAFGETLLLEL 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPS
                                                                                                                                                                                                                                         SPCSAYMITSFLDNGHGECLMDKPQNPIQLP--GD
                                                                                                                                                                                                                                                                                                                CSVIEDDGLQAAFTTAHELGHVFNMPHDDAKQCASLNG-VNQDSHMMASMLSNLDHSQPW
                                                                                                                                                                                                                                                                                                                                                  CAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPW
                                                                                                                                                                                                                                                                                                                                                                                      AAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VRGAFYLLGEAYF1QPLPAASERLATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EQDSGVQVEGLTVQYLGQAPELLGGAE---PGT----YLTGTINGDPESVASLHWDGGA 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLLLAAALLAVSDALGRPSEEDEELVVPELERA---PGHGT-TRL--RLHAFDQQLDLEL 72
                                                                                                                                                                                                                                                                          SPCSARFITDFLDNGYGHCLLDKPEAPLHLPVTGD 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                             VADQSMAEFHGSGLKHYLLTLFSVAARLYKHPSIRNSVSLVVVKILVIHDEQKGPEVTSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRPTGKAETEDEDEGTEGEDEGPQWSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETML
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     950 AA;
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                                                                        (first entry)
ADAM-type metalloprotease;
                                                                                                                                                Protein;
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drug screening;
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RESULT 12
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                                                                                                                                                          SPCSARFITDFLDNGYGHCLLDKPEAPLHLPVTGD 439
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        950 AA;
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Pred.
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No. 2.1e-75;
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fractures, scleroderma, trachoma, vascular adhesions, myocardial angiogenesis, coronary collaterals, cerebral collaterals, arteriovenous malformations, ischaemic limb angiogenesis, Osler-Webber syndrome, plaque neovascularisation, telangiectasia, haemophiliac joints, angiofibroma, fibromuscular dysplasia, wound granulation, Crohn's disease or atherosclerosis. METHI can also be used in birth control. METHI can also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; METH1; metalloprotease; thrombospondin; angiogenesis inhibition; cancer therapy; benign tumour; ocular angiogenic disease; rheumatoid arthritis; psoriasis; wound healing; endometriosis; vasculogenesis; granulation; hypertrophic scar; nonunion fracture; scleroderma, trachoma; vascular adhesion; myocardial angiogenesis; coronary collateral; cerebral collateral; arteriovenous malformation; ischaemic limb angiogenesis; oscler-Webber syndrome; plaque neovascularisation; telangiectasia; haemophiliac joint; angiofibroma; fibromuscular dysplasia; wound granulation;
                                                                                                                      individual, and for treating cancer, benign tumours, an ocular angiogenic disease, rheumatoid arthritis, psoriasis, delayed wound healing, endometriosis, vasculogenesis, granulations, hypertrophic scars, nonunion
                                                                                                                                                                                                                                      METH1 and METH2 polynucleotides and encoded polypeptides, used to inhibit angiogensis in the treatment of disorders such as cancer, rheumatoid arthritis and psoriasis -
                                                                                                                                                                                                                                                                                                                                                                                                                                            (RUBE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HUMA-)
(SMIK)
(BETH-)
                                                                                                                                                                The present sequence is human METH1 (ME for metalloprotease and TH for thrombospondin). METH1 can be used for inhibiting anglogenesis in an
                                                                                                                                                                                                              Claim 15; Fig 1; 768pp; English.
                                                                                                                                                                                                                                                                                                                                           Iruela-Arispe L, Hastings
Fornwald JA, Terrett JA;
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22-DEC-1999;
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20-JUL-1999;
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DB; AAC90057.
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FORNWALD J A.
TERRETT J A.
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RUBEN S M.
JONAK Z L.
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                         diagnostic methods
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anglogenic
  DNA encoding integrin anglogenic diseases, r
                                                                                                                                                           Fronwald JA,
Trulli SH;
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                                                                             WPI; 1998-544643/47.
N-PSDB; AAV66508.
                                                                                                                                                                                                                                   (HUMA-) HUMAN GENOME SCI INC
(SMIK) SMITHKLINE BEECHAM CO
(SMIK) SMITHKLINE BEECHAM PI
                                                                                                                                                                                                                                                                                                                                               24-APR-1997;
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n ligand polypeptide ITGL-TSP - u
restenosis, Alzheimer's disease
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2; Mismatches 119;
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                          Human; METH1; metalloprotease; thrombospondin; angiogenesis inhibition; cancer therapy; benign tumour; ocular angiogenic disease; rheumatoid arthritis; psoriasis; wound healing; endometriosis; vasculogenesis; granulation; hypertrophic scar; nonunion fracture; scleroderma, trachoma; vascular adhesion; myocardial angiogenesis; coronary collateral; cerebral collateral; arteriovenous malformation; ischaemic limb angiogenesis; Osler-Webber syndrome; plaque neovascularisation; telangiectasia; haemophiliac joint; angiofibroma; fibromuscular dysplasia; wound granulation; Crohn's disease; atherosclerosis; birth control.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This represents a human integrin ligand polypeptide ITGL-TSP. ITGL-TSP polypeptides can be used in the treatment of angiogenic diseases such as cancer, cancer metastasis, chronic inflammatory disorders, rheumatoid arthritis, atherosclerosis, macular degeneration or diabetic retinopathy, restenosis, Alzheimer's disease and tissue remodeling. They can be used to treat a subject in need of enhanced activity or expression of the ITGL-TSP polypeptide.
                                                                                                                                                                                                             Protein; SEQ
                                                                                                                                                                                                                                                                                                         AAB50011 standard;
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45.7%;
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METH can be used for inhibiting anglogenesis in an individual, and for treating cancer, benign tumours, an ocular anglogenic disease, ribeumatoid arthritis, psoriasis, delayed wound healing, endometriosis, vasculagenesis, granulations, hypertrophic scars, nonunion fractures, scleroderma, trachoma, vascular adhesions, myocardial angiogenesis, coronary collaterals, cerebral collaterals, arteriovenous malformations, isohaemic limb angiogenesis, Osler-Webber syndrome, plaque neovascularisation, telangiectasia, haemophiliac joints, angiofibroma, fibromuscular dysplasia, wound granulation, Crohn's disease or atherosclerosis. METH can also be used in birth control. METH can also be used in diagnostic methods for the prognosis of cancer. The present except and the prognosis of cancer of the present invention.
                                                                                                                                                                                                                             Query Match
Best Local S
Matches 208
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10-AUG-1999;
13-AUG-1999;
22-DEC-1999;
22-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 15; Pages 759-763; 768pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METH1 and METH2 polynucleotides and encoded polypeptides, inhibit angiogensis in the treatment of disorders such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-025136/03
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rheumatoid arthritis and psoriasis
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                                                                                                                                                                                                                                            Local Similarity
{\tt PRPTGKAETEDEDEGTEGEDEGPQWSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETML}
                                                                                     LLGVLQYRGAELHLQPLEGGTPNSA-GGPGA-----HILRRK------
                                                                                                                                                                       LLLLAAALLAVSDALGRPSEEDEELVVPELERA---PGHGT-TRL--RLHAFDQQLDLEL 90
                                                                                                                                                                                                  LLLLLLASLLPSARLASPLPREEEIVFPEKLNGSVLPGSGTPARLLCRLQAFGETLLLEL
                                                        VRGAFYLLGEAYFIQPLPAASERLATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDE
                                                                                                                RPDSSFLAPGFTLQNVGRK----SGSETPLPETDLAHCFYSGTVNGDPSSAAALSLCEG- 145
                                                                                                                                         EQDSGYQYEGLTYQYLGQAPELLGGAE----PGT-----YLTGTINGDPESVASLHWDGGA 148
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JONAK Z L.
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SMITHKLINE BEECHAM CORP
BETH ISRAEL DEACONESS M
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                                                                                                                                                                                                                                                                                         968 AA;
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Terrett JA;
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99US-0147823.
99US-0373658.
99US-0171503.
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45.7%;
                            -SPASGOGPMCNVKAP----LGSPSPRPR-RAKRFASLSRFVETLV
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Pred. No. 2.1e-75;
2; Mismatches 119
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37 LLLLLASLLPSARLASPLPREEEIVFPEKLNGSVLPGSGTPARLLCRLQAFGETLLLEL 96

Query Match Best Local S Matches 208

Local Similarity les 208; Conserv

Conservative

39.9%; 45.7%;

Score 945; DB 20; Pred. No. 2.6e-75;

Length Indels

Mismatches 119;

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Gaps

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                                   The present sequence represents human Tango-71. Tango polypeptides are useful for identifying compounds which bind the polypeptide via direct binding, competition binding assays or Tango-71, -73, -74, 76 or -83-mediated signal transduction. Tango polypeptides are also useful for identifying modulating compounds by determining effect on Tango activity. Tango polypeptides and nucleic acids are useful for diagnosing diseases related to aberrant expression of Tango, and Tango polypeptides are useful for raising antibodies which can be used in diagnostic assays for detection of Tango, and also for generating anti-idiotype antibodies for
                                                                                                                                                                                                         New TANGO polypeptides and nucleic acids encoding them - useful diagnostic agents and for treating disorders caused by aberrant expression of TANGO
                                                                                                                                                                                 Claim 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; Tango-71; Tango-73; Tango-74; Tango-76;
detection.
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                                                                                                                                                                                    36 LLLLAAALLAVSDALRRPSEEDEELVVPELERA---PGHGT-TRL--RLHAFDQQLDLEL
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Title: Perfect score:

US-10-050-200-2 1516

OM nucleic -

nucleic search, using sw

Copyright

on :

April 25,

Scoring table:

Sequence Sequence

Sequence Sequence

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
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US-09-330-491-1
US-09-330-491-1
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US-09-392-184-7
US-09-392-184-7
US-09-392-184-7
US-09-392-184-5
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US-09-491-522-8
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; ORGANISM: Homo sapiens;
; FEATURE:
; NAME/KEY: CDS;
; LOCATION: (121)..(2910)
US-09-122-126B-14
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Patent NO. 6451575
GENERAL INFORMATION:
APPLICANT: Bristol-Myers S
TITLE OF INVENTION: AGGREC
FILE REFERENCE: DM6909
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Best Local Similarity
Matches 1456; Conserv
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CURRENT FILING DATE: 1998-07-24
NUMBER OF SEQ ID NOS: 21
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US-08-012-735-1
US-08-98-116-70
US-08-384-106A-7
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Issued_Patents_NA:*
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Maximum Minimum

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length:

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                                                                                                       CCTCTCCCATGACGATTCCAAATTCTGTGAAGAGACCTTTGGTTCCACAGAAGATAAGCG
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                    AGCCACCATCACAGAATTCCTGGATGATGGCCATGGTAACTGTTTGCTGGACCTACCACG 1446
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; IENGTH: 3002
TYPE: DNA
; ORGANISM: mus musculus /
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (18)..(2810)
US-09-369-364A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zi
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 3002
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Best Local Similarity
Matches 1218; Conserv
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nilarity 82.7%;
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Pred. No. 9e-210; 
0; Mismatches 21
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Sequence 1, Application US/09130491

Patent No. 6416974

GENERAL INFORMATION:
APPLICANT: HOLTZMAN, DOUGLAS A.

APPLICANT: Goodearl, Andrew D.J.

TITLE OF INVENTION: TANGO-71, TANGO-73, TANGO-74, TA

FILE REFERENCE: 09404/04101

CURRENT APPLICATION NUMBER: US/09/130,491

CURRENT FILING DATE: 1998-08-07

EARLIER APPLICATION NUMBER: US 60/058,108

EARLIER FILING DATE: 1997-09-05

EARLIER APPLICATION NUMBER: US 60/054,961

EARLIER FILING DATE: 1997-08-06
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SOFTWARE: FASTSEQ for Windows
SEQ ID NO 1
LENGTH: 4676
TYPE: DNA
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Best Local Similarity 53.4%;
Matches 586; Conservative
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Pred. No. 5e-49;
0; Mismatches 505;
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CURRENT APPLICATION NUMBER: US/09/392,184
CURRENT FILING DATE: 1999-09-09
NUMBER OF SEQ ID NOS: 33
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 4858
TYPE: DNA
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NAME/KRY: mlsc_feature

LOCATION: (1)...(4858)

OTHER INFORMATION: reprolysin (ADAM fanae/KRY: mlsc_feature

LOCATION: (1)...(4858)

OTHER INFORMATION: n = A,T,C or G
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                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo saplens
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                            663 CGGAGGCCCACGAGCATGCTCCGGCGCACAGCAACCCGAGCGGGGACGCGCAGCACTGGCCT 722
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                                                                                                                                                                                                                                                                     CTTCAGCCACCATCACAGAATTCCTGGATGATGGCCATGGTAACTGTTTGCTGGACCTAC 1442
                                                                                                                                                                                                     AGCGCTTAATGTCTTCCATCCTTACCAGCATTGATGCATCTAAGCCCTTGGTCCAAATGCA 1382
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                                                              ATCGGCAGGGCGACGTAGGCGGCACGTGCGGGGTCGTGGACGACGAGCCCCGGCCGACTG
                                                                                                                                  CCACCGCCGCCCCAGGGGAGAAGCCGCCGGCACCACTACAGTTCCACCTCCTGCGGCGGA 1018
                                                                                                                                                                   AAGAAAAGGGGCGCGTGTACGGGGATGGGTCCGCACGGATCCTGCACGTCTACACCCGCG 602
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                                                                                                AGGGCTTCAGCTTCGAGGCCCTGCCGCCGCGCGCCAGCTGCGAAACCCCCGCGTCCACAC 662
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53.4%;
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pred. No. 1.2e-46;
0; Mismatches 505;
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SOFTWARE: PERI
SEQ ID NO 58
LENGTH: 3706
TYPE: DNA
                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                   Sequence 58, Application US/09484970B Patent No. 6426186
                                                           FILE REFERENCE: PB-0014 US
CURRENT APPLICATION NUMBER: US/09/484,970B
CURRENT FILING DATE: 2000-01-18
NUMBER OF SEQ ID NOS: 172
                                                                                                                         APPLICANT: Jones, Karen A.
APPLICANT: Volkmuth, Wayne
APPLICANT: Walker, Michael G.
TITLE OF INVENTION: BONE REMODELING GENES
THE PREPARATE DE-0014 INC
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ORGANISM: Homo sapiens FEATURE: NAME/KEY: misc_feature

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No. 6426186 007074.1

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US-09-369-364A-8
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                                                                                                                                                   Sequence 8, Patent No.
                                                                                                                                      GENERAL INFORMATION:
         APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
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NUMBER OF SEQ ID NOS: SOFTWARE: Patentin V
                                                                                                                    APPLICANT: Apte, Suneel
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                                                                                                                                                                                                                                                                                                                                        ACAGAATTCCTGGATGATGGCCATGGTAACTGTTTGCTGGACCTACCACGAAAGCAGATC 1456
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                                                                                                                                                   8, Application US/09369364A
o. 6391610
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61.2%;

 Mismatches

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US-09-392-184-7/c

US/09392184

GENERAL INFORMATION: APPLICANT: Robison Sequence 7, Application Patent No. 6395889

Robison,

Keith E.
NUCLEIC ACID MOLECULES

ENCODING

TITLE OF INVENTION: NUCLEIC ACID MOLECUL TITLE OF INVENTION: PROTEASE HOMOLOGS FILE REFERENCE: 5800-55 CURRENT APPLICATION NUMBER: US/09/392,184 CURRENT FILING DATE: 1999-09-09

NUMBER OF

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FEATURE:

NAME/KEY: CDS
LOCATION: (278)..(2992)
NAME/KEY: misc_feature
LOCATION: (3636)
OTHER INFORMATION: n = T
US-09-369-364A-8
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Best Local (
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ORGANISM: Mus
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LENGTH: 3638
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nes 394; Conserv
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                  AATTCCTGGATGATGGCCATGGTAACTGTTTGCTGGA 1437
                                                                                          TCCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATCACAG
                                                                                                                                                                ATTCCAAATTCTGTGAAGAGACCTTTGGTTCCACAGAAGATAAGCGCTTAATGTCTTCCA 1340
                                                                                                                                                                                                                                                                                                                                                      TCTTGTTCACCAGACAGAACTTCTGTGGGAAGGGAGGAGCAGTGTGACACCCTGGGGATGG
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                                                                     TCTTCATCCACGTGAACAAGACGCTGCCCTGGTCTCCCTGCAGTGCTGTCTACCTCACAG
                                                                                                                                        ATTCTAAGCCCTGTGTGAGATTGTTTGGGCCCATGGGCAAGTACCACATGATGGCGCCAT
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AGCTCCTGGATGATGGTCACGGAGATTGTCTTCTGGA
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Pred. No. 1.4e-42;
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1602
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; OTHER INFORMATION: reprolysin (ADAM family of metalloprotease)
US-09-392-184-7
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SEQ ID NO 7
LENGTH: 3126
TYPE: DNA
ORGANISM: Homo saplens
                                                                                                                                                              Sequence 3, Application US/09369364A Patent No. 6391610
                                                                                                                                           GENERAL INFORMATION:
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Best Local Similarity
Matches 374; Conserv
             APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/99/369,364A
CURRENT FILING DATE: 1999-08-06
                                                                                                        APPLICANT: Apte, Suneel APPLICANT: Hurskainen, Tiina L.
NUMBER OF SEQ ID
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                                                                                                                                                                                                                                                                                                                                                                               TCTTCCATCCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACC 1393
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ilarity 59.7%;
Conservative
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Pred. No. 4.3e-37;
0; Mismatches 249;
                                                                      Zinc
                                                                    Metalloproteases
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; FEATURE:
; NAME/KEY: CDS
; LOCATION: (3)..(737)
US-09-369-364A-10
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                                                                                                                                                                                              SOFTWARE: Patent SEQ ID NO 10 LENGTH: 739 TYPE: DNA ORGANISM: Homo:
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10, Application US/09369364A Patent No. 6391610
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Matches 212; Conserv
                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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                                                                   Matches
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APPLICANT: Hirchata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEO ID NOS: 31
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TYPE: DNA
ORGANISM: homo sapiens
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LOCATION: (1458)
OTHER INFORMATION: n. T
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OTHER INFORMATION: n=T
NAME/KEY: misc_feature
LOCATION: (1443)
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NAME/KEY: misc_feature
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                CGCTCCATCTCCCGGGCCCGCCAGGTGGAGGCTGCTTCTGGTGGCTGACGCGTCCATGGCG 856
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                                                                                                                                                                                                                                                                  PatentIn Ver.
                                                                Conservative
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                                                                Score 205; DB 4;
Pred. No. 8.5e-36;
0; Mismatches 230
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                                                                                                Length 739
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US-09-122-126B-1
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; LOCATION: (406)..(2916)
US-09-122-126B-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09122126B Patent No. 6451575 GENERAL INFORMATION:
                                                                                                                                                                                                           Query Match
Best Local Similarity 55:
Matches 361; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: AGGRECAN DEGRADING
FILE REFERENCE: DM6909
                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/122,126B CURRENT FILING DATE: 1998-07-24 NUMBER OF SEQ ID NOS: 21
                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens FEATURE:
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                                                                                                                                       CGCTTTGCTTCACTGAGTAGATTTGTGGAGACACTGGTGGTGGCAGATGACAAGATGGCC 1098
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                                                                   GCATTCCACGGTGCGGGGCTAAAGCGCTACCTGCTAACAGTGATGGCAGCAGCAGCCAAG
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FEATURE:

NAME/KEY: misc_feature

LOCATION: (1)...(5357)

OTHER INFORMATION: reprolysin (4)

NAME/KEY: misc_feature

LOCATION: (1)...(5357)

OTHER INFORMATION: n = A,T,C or

US-09-392-184-5
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GENERAL INFORMATION:
APPLICANT: RODISON, Keith E.
TITLE OF INVENTION: NUCLEIC ACID MOLECULES!
TITLE OF INVENTION: PROTEASE HOMOLOGS
FILE REFERENCE: $800-55
CURRENT APPLICATION NUMBER: US/09/392,184
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US-09-392-184-5/c
Sequence 5, Application US/09392184
Patent No. 6395889
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SEQ ID NO 5
LENGTH: 5357
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Best Local Similarity
Matches 290; Conserv
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                                                      TGATGCCAAAATGGTGGAGTACCACGGACAGCCGCAGGTTGAGAGCTATGTGCTGACCAT
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ilarity 57.0%;
Conservative
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US-09-369-364A-6
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SEQ ID NO 6
LENGTH: 3218
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                                                                                                                                                                                                                                                                                                                                                                  Query Match 8.6
Best Local Similarity 52.3
Matches 368; Conservative
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TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SED ID NOS: 31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens ADAMTS-7
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                                                                                                                                                                                                                                                          TGCTTCTGGTGGCTGACGCGTCCATGGCGGCGGTTGTATGGCCGGGGCC---TGCAGCATT 884
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                                TGAGCAAGAACGCTGCCACCACACTCAAGAACTTTTGCAAGTGGCAGCACCAACACAACC 106
                                                                         CCATCCACATCACCATTGTGCGCCTGGTCCTGCTGGAAGATGAGGAGGAGGACCTAAAGA
                                                                                                           ACATCCCCCTGGCCGTGGTGAAGGTGGTGGTGCTAGGCGACAAGGACAAGAGCCTGGAAG
                                                                                                                                                ATGTGCTGACCATCATGAACATGGTGGCCTGGCCTGTTTCATGACCCCAGCATTGGGAACC
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                                                                                                                                                                                   ACCTGCTGACCCTGGCCTCCATCGCCAATAGGCTGTACAGCCATGCTAGCATCGAGAACC
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52.3%;
                                                                                                                                                                                                                                                                                                                                                                    Score 130.4; DB 4;
Pred. No. 1.5e-19;
0; Mismatches 321;
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; NAME/KEY: CDS
; LOCATION: (2)..(2623)
US-09-369-364A-14
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US-09-369-364A-14
Sequence 14, Application US/09369364A
Patent No. 6391610
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SEQ ID NO 14
LENGTH: 2625
TYPE: DNA
ORGANISM: Mus musculus ADAMTS-9
CORGANISM: Mus musculus ADAMTS-9
                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 342; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hiurskainen, Tiina L.
APPLICANT: Hiurskainen, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
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                                                                                                                                                                                                                                                                                                          797 CGCTCCATCTCCCGGGCCCGCCAGGTGGAGCTGCTTCTGGTGGCTGACGCGTCCATGGCG 856
                                                                                                           CTGTACAGCCATGCTAGCATCGAGAACCACATCCGCCTGGCCGTGGTGGTGAAGGTGGTGGTG
                                                                                                                                                                                                                                                               CTCCCCTCACCTGGTCCCGCTGCAGCCGCCAGTATATCACCAGGTTCCTTGACCGTGGGT 1342
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ATTCATAATGAACAGGAAGGACGTTACATAAATTTCAATGCCCAGACAACATTAAAGAAC
                                           CTAGGCGACAAGGACAAGAGCCTGGAAGTGAGCAAGAACGCTGCCACCACACTCAAGAAC 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATCACAGAATTCCTGGATGATGGCC 1418
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                                                                                    ATCTATAAAGACTCAAGTATTGGAAATTTAATTAATATTGTTATTGTGAACTTAGTTGTG
                                                                                                                                                                           TTATACCACGGAGCAAACCTTCAACATTATATCTTAACCTTAATGTCCATTGTAGCTTCT
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pred. No. 1.4e-17;
0; Mismatches 293;
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LENGTH: 703
TYPE: DNA
ORGANISM: Homo sapiens
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US-09-392-184-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 6, Application US/09392184 Patent No. 6395889
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Robison, Keith E.
TITLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING
TITLE OF INVENTION: PROTEASE HOMOLOGS
FILE REPERENCE: 5800-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/392,184
CURRENT FILING DATE: 1999-09-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:

FEATURE:

NAME/KEY: misc_feature

LOCATION: (1)...(703)

OTHER INFORMATION: reprolysin (ADAM family

NAME/KEY: misc_feature

LOCATION: (1)...(703)

OTHER INFORMATION: n = A,T,C or G
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                1322 AAGCGCTTAATGTCTTCCATCCTTACCAGCATTGATGCATCTAAGCCCCTGGTCCAAATGC 138:
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Local Similarity 60.8%;
                                                                                                                                                         GTGATTGAAGACGATGGCCTCCACGCAGCCTTCACTGTGGCTCACGAAATCGGACATTTA 1261
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                                                       TCAGCATGCCCCACGACGACTCCAAGCCCTGCACACGCTCTTCGGGCCCATGGGCAAG
                                                                                              CTTGGCCTCTCCCATGACGATTCCAAATTCTGTGAAGAGACCTTTGGTTCCACAGAAGAT 1321
                                                                                                                                                                                                                                                                                                180;
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Pred. No. 2.3e-15;
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SEQ ID NO 12
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Best Local S
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APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEO ID NOS: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: CDS.
LOCATION: (3)..(5648)
NAME/KEY: misc.feature
LOCATION: (1406)
OTHER INFORMATION: n=T
NAME/KEY: misc.feature
LOCATION: (1563)
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                                                           GGCCTCCACGCAGCCTTCACTGTGGCTCACGAAATCGGGACATTTACTTGGCCTCTCCCCAT 1276
                                                                                                                                                   ATGGCAGACGTTGGGACCATATGTTCTCCAGAGCGCAGCTGTGCTGTGATTGAAGACGAT 1216
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                                                                                                             CTGGCTGAACTGGGAACCATTTGTGATCCCTATAGAAGCTGTTCTATTAGTGAAGATAGT 1115
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SUMMARIES
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AAS46100	AAC90338	AAA95826	AA168146	AAX00725	AAD35570	AAF63442	AAA95831	AAF63438	ABN86300	AAF82166	AAH20226	AAA95821	AAC90058	AAZ32001	AAF63441	AAA95827	AAX17990	ABN86294	AAD35571	AAS97182	ABK12894	AAD35569	AAH41003	AAC90067	AA232010	AAX04374	AAX19955	AAV66508	AAC90057	AAZ32000	AAH20224	AAC90360	ABQ48545	ABQ48544	ABQ48543
Human DNA encoding	AI400905 cDNA clon	Human metalloprote	Human aggrecanase-	aggrecan	Human protease cDN	Human ADAMTS-8 cDN	Human metalloprote		Human protease cDN		Human ADAM-type me	Human metalloprote	Human METH2 coding	Human METH2 encodi	Murine ADAMTS-8 cD	Rat metalloprotein		Human protease cDN	Human protease cDN		Human protease PRT	Human protease cDN	Human metalloprote	D67076 cDNA clone.	METH1 rel	secreted	Human Tango-71 enc	integ	METH1	Human METH1 encod1	Human ADAM-type me	_		-	Oligonucleotide fo

ALIGNMENTS

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RESULT 1
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                                                                       16-OCT-1997;
25-JUL-1997;
15-AUG-1997;
                                                             04-FEB-1999.
                                                                                                                                                                                      Human; aggrecan degrading metalloprotease; cartilage; proteoglycan; interglobular domain; matrix metalloprotease; bovine; interleukin-1beta; primer; PCR; amplification; inhibitor; cleavage; inhibitor; ADMP; ss; arthritis; joint injury; pseudogout.
                                        24-JUL-1998;
                                                                                 WO9905291-A2
                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                          Human aggrecan degrading metalloprotease 2
                                                                                                                                                                                                                                                                30-MAR-1999
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97US-0062169.
97US-0053850.
97US-0055836.
                                          98WO-US15438
                                                                                                  /product= ADMP-2
/note= "aggrecan degrading metalloprotease
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CC degrading metalloprotease 2 (ADMP-2). ADMP-1 (AAXX00725) and ADMP-2 are convel proteases that cleave the aggrecan (a major cartilage convel proteases that cleave the aggrecan (a major cartilage convel proteases that cleave the aggrecan (a major cartilage convel proteases that cleaves Glu373-Ala374 of the interglobular domain convergence of the conver
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08-FEB-2001

entry)

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CC AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, CC which represent the human ORFX open reading frames 1 to 3161. The ORFX CC sequences have activities such as: cytostatic; hepatotropic; vulnerary; CC antipsoriatic; antiparkinsonian; nootropic; neuroprotective; CC immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; cimunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antiinabetic; hypotensive; dermatological; immunosuppressive; CC antiinabetic; hypotensive; dermatological; antifungal; antirheumatic; CC antithyroid; and antinamemic. The sequences can be used for determining CC pathological conditions associated with an ORFX-associated disorder. The culcic acids can be used to express ORFX proteins in gene therapy CC vectors. The proteins and nucleic acids may be used to treat cancers, CC proliferative disorders, neurodegenerative disorders, osteoarthritis, CC hypertension, hypothyroidism, cholesterol ester storage, systemic lupus CC erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, CC erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, CC allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, coagulation; to inhibit thrombosis; and as a contraceptive.
   Best Local Si
Matches 1453;
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Best Local Similarity
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02-APR-1999;
05-APR-1999;
30-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel nucleic acids and peptides derived from open reading useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease -
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anticonvulsant; osteopathic; antiarthritic; immunosup
immunostimulant; thrombolytic; coagulant; vasotropic;
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 Claim 2;
                  Polynucleotide encoding novel members of a disintegrin, metalloproteinase and thrombospondin domain protein family us prevent and treat Alzheimer's disease, cancer and autoimmune
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                                                                                                                                                                                                                                                                                         Rat; ADAMTS-4; metalloproteinase; ADAM; a disintegrin and metalloproteinase domain; thrombospondin domain; vaccine; nootropic; neuroprotective; antiparkinsonian; cerebroprotective; cytostatic; antiarthritic; immunosuppressive; Alzheimer's disease; Parkinson's disease; stroke; cancer; arthriti.
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                                                           P-PSDB;
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DB; AAB21252.
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                     AGCACTGGCCTCGCAGCTCTTGGACCAGTCCGCTCTCTCGCCCGCTGGGGGGCTCAGGACC
           AGAACTGGCACCGCAGCTGCTGGACCATTCAGCTTTCTCGCCAGCTGGGAACGCGGGACC
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Query Match
Best Local Similarity
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                         CGCGTCCACACCGGAGGCCCCACGAGCATGCTCCGGCGACCAGCAACCCGAGCGACGCGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC This invention relates to murine and human.ADAMTS-N (A disintegrin-like CC and metalloprotease domain with thrombospondin type I motifs) proteins, CC designated ADAMTS-5, 6, 7, 8, 9, 10 and R1. Also included in the CC invention are cDNA sequences encoding the proteins, and antibodies CC specific for the proteins. The nucleic acid sequences and proteins may be CC used in the protein, diagnosis and treatment of diseases associated CC with inappropriate ADAWTS-N expression. Disorders that may be treated CC using the nucleic acids, proteins and antibodies include, for example CC tumour cachexia, inflammation, dermatosparaxis in cattle or Ehlers-Danlos CC syndrome type VIIC (EDS-VIIC) in humans, erosion of articular cartilage CC in arthritic (both inflammatory and non-inflammatory) disease, and they may also be used for CC angiogenesis, tumour growth-and metastases, and they may also be used for CC controlling embryogenesis and implantation of fertilised eggs. The CC present sequence represents cDNA encoding murine ADAWTS-5. The murine CC ADAMTS-5 gene is located on chromosome 16.
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                                              TAGCATCGTTACTGCAGGAGGAGGGCTGAGCGCATCCTCTGGCCACCGGGGTCACTGTTT
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05-SEP-2000; 2000DE-1044543
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is used: (i) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABQ13410-ABQ54121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Determining the degree of cytosine methylation in genomic DNA, useful for diagnosis and prognosis, comprises selective hybridization of
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AACGAAACGAATACGCCCTAACGCCACCGAAACCACTACTTCTATCGAAACACAATAAAC
                 GGCGGGACGAGTGCGCCCTGCCCACCGGAGCCACTGCTTCTATCCGGGGCACAGTGGAC
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                                                                                                                                              GACCAACTCTACTCCGACGACGACAAAATAAACTACCTCGTCTACGCGAACGACCGAAAA
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75.3%;
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                            Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA
         Claim 12;
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05-SEP-2000;
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                                                                                                                                                                                                                                                            Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; drug; side effect; cancer; central nervous system; cardiov gastrointestinal; respiratory system; single nucleotide pc SNP; cell differentiation; ds.
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CC This invention describes a novel method for determining the degree of CC methylation of a particular cytosine in a motif 5'-CpG-3', present in a cytosine (C) but not methylated C, to uracil, then part of the genomic CC cytosine (C) but not methylated C, to uracil, then part of the genomic CC The amplicon is hybridised to two classes, each with at least one CC member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers CC and the degree of hybridisation to both classes is determined from the CC lasses of oligomers, the degree of methylation is calculated. The method CC is used: (i) for diagnosis and/or prognosis of side effects of CC therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders CC of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide CC types and for investigating coll differentiation. The method allows the CC methylation status of many C residues to be determined simultaneously.

CC ab013410-AB054121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in disclosure of the invention.

Sequence 961 BP; 138 A; 102 C; 331 G; 390 T; 0 other;

ş 밁 Q Ş 밁 VQ 밁 Qy В 멍 Вр Š 밁 Ş В 20 B δÃ 8 δÃ В 9 Query Match Best Local Sim Matches 704; 667 560 547 500 487 440 427 380 367 320 307 260 247 200 187 140 127 80 67 20 7 GCAGCGCACTATGCTCGGGTGGGGCGTCCCTGCTGCTGCTGCGCGTTCCGCCTGCCCCT 66 GGCCCACGAGCATGCTCCGGCGCACAGCAACCCGAGCGGCGCACGCGCACTGGCCTCGCA CTTCAGCTTCGAGGCCCTGCCGCCGCGCCAGCTGCGAAACCCCCGCGTCCACACCCGGA GGTTAAGTACGCGCGTTATATTTTAAAGTTATTGTTGCGCGGGATTTTGGGCGGAGGAAGA GGTCAAGCACGCGCGCTACACCCTAAAGCCACTGCTGCGCGGAACCCTGGGCGGAGGAAGA AGGCGGGACGACTGCCCCTGGCGCCCACCGGAGCCACTGCTTCTATCGGGGCACAGTGGA 426 GTTCCTCTTGGACCTGGAGCGAGATGGTTCGGTGGGCATTGCTGGCTTCGTGCCCGCAGG TCCCGGCCACCCGCACCCCCTGGCGCGAGCGAGCGAGGAGCAAGGGGCTGGTGCAGAACAT TGTAGTAGTCGTTTAGTTTCGTCGGCGGGTAGGGGGGAGGAGGTGTAGGAGCGAGTCGAGTT GGTCGCGGTTTCGTCGCCGATATTTGTTTAGGATAAAGTCGGGTAGTTTTCGATTGT GGCCGCGGTCGGCCCGCCGCCGACACCTGCCCAGGATAAAGCCCGGGCAGCCTCCGACTGC 126 TTTTAGTTTTGAGGTTTTGTCGTCGCGCGCTTAGTTGCGAAATTTTCGCGTTTATATCGGA CGTTAGTTTTCGTTTTTTGGTTGTTTTTGATTTTTGTGGGGGGTTTTCGACGGTTTTTTTCGC GTTTTTTTTGGATTTGGAGCGAGATGGTTCGGTGGGTATTGTTGGTTTCGTGTTCGTAGG CGACCAACTCTACTCCGGCGGCGGCCAAGGTGGGCTACCTCGTCTACGCGGGGCGGCCGCAG TTTCGGTTATTCGTATTTTTTGGCGTAGCGGCGTAGGAGTAAGGGGGTTGGTGTAGAATAT AGGCGGGACGAGTGCGTTTTGGCGTTATCGGAGTTATTGTTTTTATCGGGGTATAGTGGA Similarity Conservative 37.0%; 74.7%; 0; Score 561.2; DB 24; pred. No. 8.1e-113; 0; Mismatches 238; Indels Length 0; 546 679 619 909 559 486 366 306 246 186 79 499 439 379 319 259 0

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This invention describes a novel method for determining the degree of committee methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the CC label on the amplicon. From the ratio of labels hybridised to the two CC classes of oligomers, the degree of methylation is calculated. The method is used: (1) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders cof the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation of cell or tissue types and for investigating cell differentiation. The method allows the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Determining the degree of cytosine methylation for diagnosis and prognosis, comprises selective amplicons from chemically treated DNA -
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05-SEP-2000;
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Pred. No. 8.1e-113;
0; Mismatches 238;
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                                                                                                                                                         This invention describes a novel method for determining the degree of CC methylation of a particular cytosine in a motif 5'-CpG-3', present in a cytosine (C) but not methylated C, to uracil, then part of the genomic CC The amplicon is hybridised to two classes, each with at least one CC The amplicon is hybridised to two classes, each with at least one CC member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers and the degree of hybridisation to both classes is determined from the CC lasses of oligomers, the degree of methylation is calculated. The method CC is used: (1) for diagnosis and/or prognosis of side effects of CC is used: (1) for diagnosis and/or prognosis of side effects of CC is used: (1) for diagnosis and/or prognosis of side effects of CC therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders CC of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide CC types and for investigating cell differentiation. The method allows the CC methylation status of many C residues to be determined simultaneously.

CC ab013410-AB054121 represent genomic DNA sequences used to illustrate the method for determining the degree of cytosine methylation described in the discrement of the invention.
                                                                         Query Match
Best Local Similarity
Matches 642; Conserv
                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 12; 56pp + Sequence Listing; 56pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                           Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Olek A,
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05-SEP-2000;
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                                                                                                                                                    disclosure of the invention.
                        CAACGCACTATACTACTCGAATAAACGTCCCTACTACTATACGCGTTCCGCCTACCCCCTA 791
  GCCGCGGTCGGCCGCCGCCGACACCTGCCCAGGATAAAGCCCGGGCAGCCTCCGACTGCT 127
                                        CAGCGCACTATGCTGCGCGTGCGCGCGTCCCTGCTGCTGCGCGTTCCGCCTGCCCCTG 67
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Pred. No. 3.
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drug; side effect; cancer; central ner
gastrointestinal; respiratory system;
SNP; cell differentiation; ds.
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                                                                                                                                 (first entry)
                                                         methylation; 5'-CpG-3'; uracil; cytosine; diagnosis;
                                                                                             for detecting cytosine methylation
                                        cancer; central nervous system;
                                                                                                                                                                                                            DNA;
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                      single nucleotide
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                      polymorphism;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention describes a novel method for determining the degree of methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert cytosine (C) but not methylated C, to uracil, then part of the genomic DNA that contains the target C is amplified to form a labeled amplicon. The amplicon is hybridised to two classes, each with at least one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 957 BP; 363 A; 345 C; 102 G; 147 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA -
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05-SEP-2000;
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                                                                                                                        ACCGCGATCGACCCCGCCGCGACACCTACCCAAAATAAAACCGAACAACCTCCGACTACT
                                                                                                                                                                                                                                                                                                                                                               GCCGCGGTCGGCCCCCGCGGACACCTGCCCAGGATAAAGCCGGGCAGCCTCCGACTGCT 127
GGCGGGACGAGTGCGCCCTGGCGCCCACCGGAGCCACTGCTTCTATCGGGGGCACAGTGGAC
                                 TTCCTCTTAAACCTAAAACGAAATAATTCGATAAACATTACTAACTTCGTACCCGCAAAA
                                                                                                         GACCAACTCTACTCCGACGACGACAAAAAAAACTACCTCGTCTACGCGAACGACCGAAAA
                                                                                                                                                                              CCCGACCACCCGCACCCCTAACGCAACGACGCAAAAACAAAAAACTAATACAAAACATC
                                                                                                                                                                                                                                                    TTCCTCTTGGACCTGGAGCGAGATGGTTCGGTGGGCATTGCTGGCTTCGTGCCCGCAGGA
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Pred. No. 3.1e-103;
0; Mismatches 208;
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                                                                                                                                            01-SEP-2000;
05-SEP-2000;
                                                                                                                                                                                                                                                                              gastrointestinal; respiratory system; single nucleotide
SNP; cell differentiation; ds.
                                                                                                                                                                                                                                                                                                      drug; side effect;
                                                                                                                                                                                                                                                                                                                 Human; cytosine methylation; 5'-CpG-3'; uracil; cytosine; diagnosis;
                                                                                                                                                                                                                                                                                                                                         Oligonucleotide for detecting cytosine methylation
                                                                                                                                                                                                                                                                                                                                                                                                                ABQ48544 standard; DNA;
                     Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization amplicons from chemically treated DNA -
                                                                     WPI; 2002-371829/40.
                                                                                            Olek A,
                                                                                                                                                                              01-SEP-2001; 2001WO-EP10074.
                                                                                                                                                                                                        07-MAR-2002.
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                                                                                            Piepenbrock C,
                                                                                                                                            2000DE-1043826
2000DE-1044543
                                                                                                                                                                                                                                                                                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                                      cancer; central nervous system;
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Claim 12; 56pp + Sequence Listing; 56pp; German.

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This invention describes a novel method for determining the degree of CC methylation of a particular cytosine in a motif 5'-CpG-3', present in a genomic sample of DNA. The sample is treated chemically to convert CC cytosine (C) but not methylated C, to uracil, then part of the genomic CC DNA that contains the target C is amplified to form a labeled amplicon. CC The amplicon is hybridised to two classes, each with at least one CC and the degree of hybridised to two classes, each with at least one CC and the degree of hybridisation to both classes is determined from the CC label on the amplicon. From the ratio of labels hybridised to the two CC classes of oligomers, the degree of methylation is calculated. The method CC is used: (1) for diagnosis and/or prognosis of side effects of CC therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory systems etc., particularly by detecting mutations or single nucleotide polymorphisms (SNP's); and (ii) for differentiation. The method allows the methylation status of many C residues to be determined simultaneously. ABD11410-Nap54121 represent genomic DNA sequences used to illustrate the two conditions of the invention.
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Best Local
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GGCCCACGAGCATGCTCCGGCGCACAGCAACCCGAGCGGACGCGCAGCACTGGCCTCGCA
                                                                                  CTTCAGCTTCGAGGCCCTGCCGCCGCCGCCGCCACACCGGAAAACCCCCGCGTCCACACCGGA
                                                                                                                                                                          AAAGGGCCCTGTACGGGATGGGTCCGCACGGATCCTGCACGTCTACACCCCGCGAGGG
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                                                                                                                                                AAAGGGGCGCGTGTACGGGATGGGTTCGTACGGATTTTGTACGTTTATATTCGCGAGGG
                                                                                                                                                                                                                                                  GCTTAAGTACGCGCGTTATATTTTAAAGTTATTGTTGCGCGGATTTTTGGGCGGAGGAAGA
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This invention describes a novel method for determining the degree of CC methylation of a particular cytosine in a motif 5'-CpG-3', present in a CC genomic sample of DNA. The sample is treated chemically to convert CC cytosine (C) but not methylated C, to uracil, then part of the genomic CC DNA that contains the target C is amplified to form a labeled amplicon. CC The amplicon is hybridised to two classes, each with at least one member, of oligonucleotides and/or peptide-nucleic acid (PNA) oligomers CC and the degree of hybridisation to both classes is determined from the CC label on the amplicon. From the ratio of labels hybridised to the two CC classes of oligomers, the degree of methylation is calculated. The method is used: (1) for diagnosis and/or prognosis of side effects of therapeutic drugs and of a wide range of diseases, e.g. cancer, disorders of the central nervous, cardiovascular, gastrointestinal and respiratory contended to the central nervous, cardiovascular, gastrointestinal and respiratory contended to particularly by detecting mutations or single nucleotide contemplation status of many C residues to be determined simultaneously.

CC methylation status of many C residues to be determined simultaneously.

CC method for determining the degree of cytosine methylation described in
       RESULT 12
ABQ48545/c
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                                                                                                                                                                                                                                                                                                                                                                          Claim 12; 56pp + Sequence Listing; 56pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                 amplicons from chemically treated
                                                                                                                                                                                                                                                                                                                                                                                                                                  Determining the degree of cytosine methylation in genomic DNA, for diagnosis and prognosis, comprises selective hybridization
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Query Match Best Local Similarity

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Sequence

528

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123

C; 130 Score Pred.

<u>ი</u> 425; NO.

140 T; 0 other;

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The present invention relates to human METH1 and METH2, (ME for commetalloprotease and TH for thrombospondin; see AAB50002 and AAB50003). The present sequence is an expressed sequence tag (EST) for METH. METH CC can be used for inhibiting angiogenesis in an individual, and for rheumatoid arthritis, psoriasis, delayed wound healing, endometriosis, cc vasculogenesis, granulations, hypertrophic.scars, nonunion fractures, cC scleroderma, trachoma, vascular adhesions, myocardial angiogenesis, cc coronary collaterals, cerebral collaterals, arteriovenous malformations, cc ischaemic limb angiogenesis, Osler-Webber syndrome, plaque concoversionation, telangiectasia, haemophiliac joints, angiofibroma, cf ibromuscular dysplasia, wound granulation, Crohn's disease or cherosclerosis. METH can also be used in birth control. METH can also be used in birth control.
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13-AUG-1999;
22-DEC-1999;
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HASTINGS G A.
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SMITHKLINE BEECHAM CON
BETH ISRAEL DEACONESS
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The invention relates to the novel human ADAM (A Disintegrin And Metalloproteases) type metalloproteases MDTS4 (AAB73549) and MDTS5 (AAB73550). The metalloproteases can be used for the treatment of cancers and arthritis. The invention also relates to the genes encoding MDTS4 and MDTS5, vectors and host cells containing the MDTS4 or MDTS5 genes, the recombinant production of MDTS4 and MDTS5, and antibody specific for MDTS4 or MDTS5, and methods of screening for compounds which modulate the activity of MDTS4 and/or MDTS5. The present Sequence 2853 BP; 704 A; 734 C; 816 G; 599 T; 0 other; sequence represents cDNA encoding human MDTS4. 22; Length

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Best Local Similarity
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                                                            GGAAAGCGGAGACCGAAGACGACGACGAAGGGACTGAGGGCCGAGGACGAAGGGCCTCAGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; METH1; METH2; anti-angiogenic; metalloprotease thrombospondin; cancer; diagnosis; hyperproliferative disorder; autoimmune disease; angiogenesis inhibitor; abnormal wound healing; inflammation; rheumatoid arthritis; psoriasis; endometrial bleeding disorder; diabetic retinopathy; macula degeneration; haemangioma; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1349
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                         AAZ332000 and AAZ32001 encode, and AAY49501 and AAY49502 represent, human metalloprotease thrombospondin (METH) proteins METH1 and METH2 respectively. METH1 and METH2 have been found to be potent inhibitors of angiogenesis both in vitro and in vivo. They can be used for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               arterial-venous malformation; immune deficiency; ss:
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                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                  New isolated metalloprotease thrombospondin polypeptides, use treating hyperproliferative disorders, cancers or autoimmune
                                                                                                                                                                                                                                                                                                                                         P-PSDB; AAY49501
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28-AUG-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immune deficiencies or disorders may be genetic, somatic, such as cancer or some autoimmune disorders, acquired (e.g. by chemotherapy o toxins), or infectious. They can also be used to treat inflammatory conditions, both chronic and acute conditions. The products can also used for detection and diagnosis. AAZ32002 to AAZ32080, and AAY49503 AAZ49511 represent sequences given in the exemplification of the present sequences.
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                                                                                            CCACACTCAAGAACTTTTTGCAAGTGGCAGCACCAACACAACCAGCTGGGAGATGACCATG
                                                                                                                                             TGAAGGTGGTGGTGCTAGGCGACAAGGACCATGGAAGTGAGCAAGAACGCTGCCA 1023
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                           CGGTGGCAGCCAGATTGTACAAACACCCCCAGCATTCGTAATTCAGTTAGCCTGGTGGTGG
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Search completed: April 25, 2003, 16:50:49 Job time: 675.931 secs

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SUMMARIES

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ALIGNMENTS

AUTHORS	REFERENCE	ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	LOCUS	RESULT 1 AF142099
Abbaszade, I., Liu,R.Q., Yang,F., Rosenfeld,S.A., Ross,O.H., Link,J.R., Ellis,D.M., Tortorella,M.D., Pratta,M.A., Hollis,J.M., Wynn,R., Duke,J.L., George,H.J., Hillman,M.C. Jr., Murphy,K.,	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 5533)	Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Homo sapiens.		AF142099.1 GI:5733437	AF142099		AF142099 5533 bp mRNA linear · PRI 16-AUG-1999	

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                                              ACTCAAGAACTTTTGCAAGTGGCAGCACCAACACACACAGCTGGGAGATGACCATGAGGA 1086
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906

952 846 892 786 832

1072 966 1012

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1372 1266

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REFERENCE
AUTHORS
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JOURNAL
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Best Local Similarity 99.6
Matches 1455; Conservative
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                                      127 TGCAGCAGCCGCCCAGCCCCGCCGGCGGCAGGGGAGGAGGTGCAGGAGCCGAGCCGAGCC 186
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                                                                                                      GGCCGCGGTCGGCCCCGCCGCGACACCTGCCCAGGATAAAAGCCGGGCAGCCTCCGACTGC 126
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GGCCGCGGTCGGCCCGCCGGCGACACCTGCCCAGGATAAAGCCCGGGCAGCCTCCGACTGC
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1 sogai, T. and Yamamoto, J.

1 sogai, T. and Yamamoto, J.

Direct Submission

Direct Submission

Submitted (04-JUL-2002) Takao Isogai, FLJ Project(HRI Team); 2-6-7

Kazusa-Kamatari, Kisarazu, Chiba 292-0812, Japan

(E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)

NEDO human cDNA sequencing project supported by Ministry of

Economy, Trade and Industry of Japan; cDNA full insert sequencing:

Research Association for Biotechnology (RAB); cDNA library

construction: Helix Research Institute (HRI) (supported by Japan

Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB,

HRI, and Biotechnology Center, National Institute of Technology and

realization: Clone Selection for Fall insert course of Technology and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kawakami,B., Sugiyama,A., Takemoto,M., Sugiyama,T., Irie,R., Otsuki,T., Sato,H., Wakamatsu,A., Ishii,S., Yamamoto,J., Isono, Kawai-Hio,Y., Saito,K., Nishikawa,T., Kimura,K., Yamashita,H., Matsuo,K., Nakamura,Y., Sekine,M., Kikuchi,H., Kanda,K., Wagatsuma,M., Murakawa,K., Kanehori,K., Takahashi-Fujii,A., Oshima,A., Suzuki,Y., Sugano,S., Nagahari,K., Masuho,Y., Nagai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                oligo capping; fis (full insert sequence).
Homo sapiens uterus cDNA to mRNA, clone_lib:UTERU2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens cDNA FLJ36738 fis, clone UTERU2013231, to Homo sapiens aggrecanase-2 (ADAMTS11) mRNA. AK094057
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="uterus"
/clone_lib="UTERU2"
/note="cloning vector: pME18SFL3"
810 c 715 g 535 t
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/db_xref="taxon:9606"
/clone-"UTERU2013231"
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99.6%;
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Pred. No. 3.4e-251;
0; Mismatches 6;
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highly similar
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1266	TGAAGACGATGGCCTCCACGCAGCCTTCACTGTGGCTCACGAAATCGGACATTTACTTGG	1207	Оу
1978		1919	
1206 1918	GGGAATGGCAGACGTTGGGACCATATGTTCTCCAGAGCGCAGCTGTGCTGTGAT 	8 1	ОУ
1146 1858	GCACTACGATGCAGCTATCCTGTTTACTCGGGAGGATTTATGTGGGCATCATTCAT	1087 1799	Db Oy
1086 1798	ACTCAAGAACTTTTGCAAGTGGCAGCACCAACACAACCAGCTGGGAGATGACCATGAGGA		Qy Db
1026	GGTGGTGGTGCTAGGCGACAAGGACAAGAAGCCTGGAAGTGAGCAAGAACGCTGCCACCAC	967	Qy
1738		1679	Db
966 1678	CGCCAATAGGCTGTACAGCCATGCTAGCATCGAGAACCACATCCGCCTGGCCGTGGTGAA	907 1619	Оy
906 1618	GTCCATGGCGCGGTTGTATGGCCGGGGCCTGCAGCATTACCTGCTGACCCTGGCCTCCAT		Qy Db
846	GCGGCGGCGCCGCTCCATCTCCCGGGCCCGCCAGGTGGAGCTGCTTCTGGTGGCTGACGC	787	Qy
1558		1499	Db
786	GCTCTTGGACCAGTCCGCTCTCTCGCCCGCTGGGGGCTCAGGACCGCAGACGTGGTGGCG	727	Qy
1498		1439	Db
726	GGCCCACGAGCATGCTCCGGCGCACAGCAACCCGAGCGGACGCGCAGCAGCACTGGCCTCGCA	667	Qy
1438		1379	Db
666	CTTCAGCTTCGAGGCCCTGCCGCCGCGCGCGCGCGCGCGC	607	Qy
1378		1319	Db
606 1318	AAAGGGCCCGTGTACGGGATGCGTCCGCACGGATCCTGCACGTCTACACCCGCGAGGG	547 1259	9 4
546	GGTCAAGCACGCGCGCTACACCCTAAAGCCACTGCTGCGCGGACCCTGGGCGGAGGAAGA	487	Qy
1258		1199	db
486	CGGTAGTCCCCGCTCTCTGGCTGTCTTTGACCTCTGTGGGGGTCTCGACGGCTTCTTCGC	427	Qy
1198		1139	Db
426	AGGCGGGACGAGTGCGCCCTGGCGCCACCGGAGCCACTGCTTCTATCGGGGCACAGTGGA	367	Qy
1138		1079	Db
366	GTTCCTCTTGGACCTGGACCGAGATGGTTCGGTGGCCATTGCTGGCTTCGTGCCCGCAGG	307	Qy
1078		1019	Db
306	CGACCAACTCTACTCCGGCGGCGCGCAAGGTGGGCTACCTCGTCTACGCGGGCGG	247	Qy
1018		959	Db
246 958	TCCCGGCCACCCGCACCCCCTGGCGCAGCGCGCGCAGGAGCAAGGGGCTGCTGCTGCAGAACAT	. 899	Оу

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RESULT 3
AP001601/c
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AUTHORS
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                                                                                              GCAGCGCACTATGCTGCTCGGGTGGGGCGTCCCTGCTGCTGCTGCGGCGTTCCGCCTGCCCCT 66
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                                                           CTTAATGTCTTCCATCCTTACCAGCATTGATGCATCTAAGCCCCTGGTCCAAATGCACTTC
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                        TCCCGGCCACCCGCACCCCTGGCGCGCAGCGAGCAAGGGGGCTGGTGCAGAACAT
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                                                Published only in DataBase (2000) 2 (bases 1 to 17258) Shimizu, N. Kudoh, J. and Shibuya, Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                submitted (04-APR-2000) Nobuyoshi Shimizu, Keio University, Submitted (04-APR-2000) Nobuyoshi Shimizu, Keio University, Suof Medicine, Molecular Biology; 35 Shinanomachi, Shinjuku-Ku, 160-8582, Japan (E-mail:nshimizu@dmb.med.keio.ac.jp, Tel:81-3-3351-2370, Fax:81-3-3351-2370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalla; Eutherla; Primates; Catar
1 (bases 1 to 172558)
Shimizu,N., Kudoh,J. and Shibuya,K.
Homo sapiens genomic DNA, chromosom
APP-D21S292 region
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                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                        /cell_line="FLEB14-14"
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32300 c 32498 g 53807 t
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Eutheria; Primates;
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complete
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                                                                                                                                                                                            Score 1113.4; DB 9;
Pred. No. 1.3e-190;
Pred. No. 1.3e-190;
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NA, chromosome 21,
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clone:KB1346F1
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LOCUS
DEFINITION
ACCESSION

AP001698 340000 Homo sapiens genomic DNA, chr AP001698 AL163243 BA000005 AP001698.1 GI:7768708

chromosome

DNA ~ 21q,

linear section

PRI 10-MAY-2000

VERSION

RESULT 4 AP001698/c

KEYWORDS SOURCE ORGANISM

Homo sapiens Eukaryota; Me

Homo sapiens DNA.

Mammalia;

Eutheria;

Chordata; Primates;

Craniata; Vertebrata; Catarrhini; Hominidae;

Euteleostomi;

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           GCACTACGATGCAGCTATCCTGTTTACTCGGGAGG
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On May 30, 2000 this sequence version replaced gi:7717298.
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Hattori,M., Fujiyama,/
Park,H.S., Toyoda,A.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * Keio University School of Medicine, Molecular Biology, * Tokyo 160-8582, Japan, e.mail: nshimizu@dmb-med.keio.ac.jp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e.mail: hattori@gsc.riken.go.jp
URL: http://hgp.gsc.riken.go.jp/
                                                                                                                                                                                                                                    e.mail: info-chr21@molgen.mpg.de
URL: http://chr21.rz-berlin.mpg.c
L163243: Submitted (10-Apr-2000).
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                                                                                                                                                                                                                                                                                                                         Max-Planck Institute for Molecular Genetics, Ihnestrasse 73, D-14195 Berlin, Germany,
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                                                                                        /db_xref="taxon:
/chromosome="21"
                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
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      /organism="Homo sapiens"
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/note="L2"
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/note="MIR"
                                                      complement(5923.
/gene="ADAMTS5"
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ATTLKNPCKWOHQHNAULDDHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPER
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complement(join(<5923. .6055,16472./gene-"ADANTS5"
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311211. .>340000
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/gene="ADAMTS5"
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TGCAGCCGCCCAGCCCGCCGCCGCCGCGGCAGGGGGGAGGTGCAGGAGCCGAGCCGAGCC
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                      GTTCCTCTTGGACCTGGAGCGAGATGGTTCGGTGGGCATTGCTGGCTTCGTGCCCGCAGG
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/note="CpG island"
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/gene="ADAMTS5"
18711. .19114
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/rpt_family="LINE/L2"
/rpt_type=DISPERSED
8515. .8613
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/note="CpG island"
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14826. .14871
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/note="LTR50"
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8614. .8663
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10905. .10976
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/note="(TAGA)n"
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ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE RESULT 5 AC025891/c LOCUS REFERENCE DEFINITION AUTHORS JOURNAL Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalla; Eutherla; Primates; Catarrhini; Hominidae; 1 (bases 1 to 16381)
Birren,B., Linton,L., Nusbaum,C. and Lander,E.
Homo sapiens chromosome 21, clone RP11-588J22 Birren, B., Linton, L., I Anderson, S., Baldwin, J Unpublished
2 (bases 1 Homo sapiens chromosome 21 clc SEQUENCE, 18 unordered pieces Homo sapiens AC025891.3 GI:10047872 HTG; HTGS_PHASE1; HTGS_DRAFT Homo sapiens. (bases 1 to 163811) Nusbaum,C., J., Barna,N., 163811 bp DNA linear ne 21 clone RP11-588J22 map 21, Lander, E., A Bastien, V., Hominidae; Abraham, H., Euteleostomi; WORKING DRAFT Allen, N.,

Boguslavkiy,L.,

Howland, J.C Grand-Pierre, N., Galagan,J., Gardyna,S.,

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Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McDanan, P., McGurk, A., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C. H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, T., Miranda, C., Mlenga, V., Morrow, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Pisani, C., Santos, R., Schauer, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Trighino, J., Yessillev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vola, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wu, X., Wyman, D., Ye, W.J., Volan, R., Walson, B., Wals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (16-MAR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Sep 10, 2000 this sequence version replaced gi:7342190.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
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Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://ftp.genome.washington.edu/RM/RepeatMasker.html
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NOTE: This is a 'working draft' sequence. It currently consists of 18 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
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                                                                                                                                                                                                                                                                                                             27637: contig of 27637 bp in length
27638 27737; gap of 100 bp
27738 28922: contig of 1085 bp in length
28823 28922: gap of 100 bp
28923 32108: contig of 3186 bp in length
32109 32208: gap of 100 bp
32209 34033: contig of 1825 bp in length
34034 34133: gap of 100 bp
34134 39035: contig of 4902 bp in length
34034 34133: gap of 100 bp
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Consensus quality: 150751 bases at least Q40
Consensus quality: 157173 bases at least Q30
Consensus quality: 159998 bases at least Q20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Web site: http://www-seq.wi.mit.edu
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Insert size: 162111; sum-of-contigs
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44000: gap of 100 bp
50223: contig of 6223 bp in length
50223: gap of 100 bp
55366: contig of 5043 bp in length
55466: gap of 100 bp
60972: contig of 5506 bp in length
61072: gap of 100 bp
68474: contig of 7402 bp in length
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                                                                                                                                                                                                                100 bp 100: contig of 4765 bp in gap of 100 hm
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      111318 128495: contig of 17178 bp in length 128496 128595: gap of 100 bp 128596 139817: contig of 1722 bp in length 139818 139917: gap of 100 bp 139918 15952: contig of 17035 bp in length 156953 157052: gap of 17035 bp in length
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1. .27637
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766; gap of 100 bp
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75868: contig of 7294
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Hurskainen, T.L., Hirohata, S., Seldin, M.F. and Apte, S.S. Direct Submission
Submitted (06-APR-1999) Biomedical Engineering/Wb-3, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      שיטיג עף mxNA linear ROD 26-SEP-1 Mus musculus putative secreted metalloprotease ADAMTS5 (Adamts5) mRNA, complete cds.
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QESPSVHSRSRRRSALAPQLLDHSAFSPSGRACOPTWARRRRSSISRAGOVELLLVAD
SSMARMYGRGLOHYLLTLAS IANRLYSHAS IENHI RLAVVKVVVLTDKDTSLEVSKNA
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GRMDYGARLWCAVYROGGWVCLLDKLDDSKECEENFGTTEDKRLMSSILTSIDASK
PWSKCTSATITELDDGHGNCLLDLPRKQILGBEELPGGTYDAFQQCNLTFGPETSVC
PGMDYGARLWCAVYROGGWVCLTKKLDAVEGTPCGKGRVCLQGKCVDKTXKKYSTSS
HGNWGSWGPWGOCSRSCGGGVOFAYRHCNUPAPRNSGRYCTGKRAIYRSCSTYPCPPN
GKSFRHEQCEAKNGYQSDAKGYKTEVEWVPKYAGVDROCGVCGDDNSSCTK IGTFNK
KSKGYTDVVRIPEGATHIKVROFKAKDOTRFPAYLALKKKTGEYLINGKYMISTSETI
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/protein_id="AAD56356
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/db_xref="taxon:10090"
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AJ328940.1
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Direct Submission
Submitted (16-MAY-2001) Microbio
Karolinska Institute, Theorells
Sweden
                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 663)
Kutsenko, A. S., Gizatullin, R.Z., Al-Amin, A.N., Wang, F., Kvasha, S. Podowski, R.M., Muravenko, O. V., Podowski, R.M., Muravenko, O. V., Levitsky, V.G., Kolchanov, N.A., Protopopov, A.I., Kashuba, V.I., Levitsky, V.G., Kolchanov, N.A., Protopopov, A.I., Kashuba, V.I., Kisselev, L.L., Wasserman, W., Wahlestedt, C. and Zabarovsky, E.R. Kisselev, L.L., Wasserman, W., Wahlestedt, C. and Zabarovsky, E.R. Koti, Flanking sequences: a tool for gene discovery and verificates.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
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12136098
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RS Muzny, D.M., Adams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Ayele, M., Banks, T., Barbaria, J., Benton, J., Binage, K., Blankenburg, K., Bonnin, D., Bouck, J., Benton, J., Binage, K., Blankenburg, K., Bonnin, D., Bouck, J., Byrant, N.P., Bouck, J., Brieva, M., Brown, E., Bryant, N.P., Bouck, J., Charce, S.R., Carter, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chowahry, I., Christopoulos, C., Chen, Z., Chowahry, I., Christopoulos, C., Chen, Z., Chowahry, I., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Davy-Carroll, L., Dederich, D.A., Delaney, K.R., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwaite, K.J., Draper, H., Dugan-Rocha, S., Durbin, K.J., Earnhart, C., Edgar, D., Edwards, C.C., Elhaj, C., Escotto, M., Falls, T., Ferraguto, D., Flagg, N., Ford, J., Foster, P., Frantz, P., Gabisi, A., Gao, J., Garcia, A., Garner, T., Garza, N., Gill, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S., Hamilton, K., Hernandez, O., Hodgson, A., Hogues, M., Holloway, C., Hollins, B., Hemsi, F., Howard, S., Huber, J., Hullyk, S., Hume, J., Jackson, L.E., Jacobson, B., Jila, Y., Johnson, R., Jolivet, S., Joudah, S., Karlsson, E., Kally, S., Khan, U., King, L., Korvah, J., Kovar, C., Kratovic, J., Klick, A., Landry, N., Leal, B., Lewis, L.C., Lewis, L., Li, J., Liu, W., Loulseged, H.,
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Massey,E., Mawhiney,E., McLeod,M.P., Meador,M., Mei,G., Metzker,M.,
Miner,G., Miner,Z., Mitchell,T., Mohabbat,K., Morgan,M., Morris,S.,
Miner,G., Miner,Z., Mitchell,T., Mohabbat,K., Morgan,M., Morris,S.,
Moser,M., Neal,D., Newtson,J., Newtson,N., Nguyen,A., Nguyen,N.,
Myuyen,N., Nickerson,E., Nwokenkwo,S., Oguh,M., Okwuonu,G.,
Oragunye,N., Oviedo,R., Pace,A., Payton,B., Peery,J., Perez,L.,
Peters,L., Pickens,R., Primus,E., Pu,L.L., Quiles,M., Ren,Y.,
Rives,M., Rojas,A., Rojubokan,I., Rolfe,M., Ruiz,S., Savery,G.,
Scherer,S., Scott,G., Shen,H., Shooshtari,N., Sisson,I.,
Sodergren,E., Sonaike,T., Sparks,A., Stanley,H., Stone,H.,
Sutton,A., Svatek,A., Tabor,P., Tamerisa,A., Tamerisa,K., Tang,H.,
Tansey,J., Taylor,C., Taylor,T., Telfrod,B., Thomas,N., Thomas,S.,
Usmani,K., Vasquez,L., Vera,V., Villalon,D., Vinson,R., Wang,O.,
Wang,S., Ward-Moore,S., Warren,R., Washington,C., Watlington,S.,
Williams,G., Williamson,A., Wleczyk,R., Wooden,S., Worley,K.,
Wu,C., Wu,Y., Wu,Y.F., Zhou,J., Zorrilla,S., Nelson,D.,
Direct Submission
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Direct Submission
Submitted (17-JUL-2002) Human Genome Sequencing of Molecular and Human Genetics, Baylor College Of Molecular Houston, TX 77030, USA
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Direct Submission
Submitted (31-JAN-2002) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
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On Jul 13, 2002 this sequence version replaced g1:18846671.
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                                                                                                                                                               NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 74 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Consensus quality: 134604 bases at least Q40
Consensus quality: 144067 bases at least Q30
Consensus quality: 144291 bases at least Q20
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Center code: BCM
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contig of 1297; gap of unknown contig of 1095; gap of unknown contig of 1077; contig of 1077;
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                                    TCGGTGCACAGTAGTTCTAGGCGACGCACGCAGCTGGCACCGCAGCTGCACCATTCA
                                                                                              CCGGCGCACAGCAACCCGAGCGGACGCGCAGCACTGGCCTCGCAGCTCTTGGACCAGTCC
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Best Local Similarity
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NR5-CC7RS,
AJ335912
                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutherla; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 723)

Kutsenko,A.S., Gizatullin,R.Z., Al-Amin,A.N., Wang,F., Kvasha,S.M., Podowski,R.M., Matushkin,Y.G., Gyanchandani,A., Muravenko,O.V., Levitsky,V.G., Kolchanov,N.A., Protopopov,A.I., Kashuba,V.I., Kisselev,L.L., Wasserman,W., Wahlestedt,C. and Zabarovsky,E.R. Noti flanking sequences: a tool for gene discovery and verification of the human general sequences.
                                                                                                                                                                                                                                                                                     Zabarovsky,E.R.
Direct Submission
Submitted (16-MAY-2001) Microbiology
Karolinska Institute, Theorells vag,
                                                                                                                                                                                                                                                                             Sweden
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/db_xref="taxon:9606"
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Pred. No. 1.3e-68;
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Box 280, Stockholm 171
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22131767
12136098
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Direct Submission
Submitted (16-MAY-2001) Microbiology and Tumorbiology Centre,
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Rutsenko, A.S., Gizatullin, R.Z., Al-Amin, A.N., Wang, F., Kvasha, S., Podowski, R.M., Matushkin, Y.G., Gyanchandani, A., Muravenko, O.V., Podowski, R.M., Matushkin, Y.G., Gyanchandani, A.I., Kashuba, V.I., Levitaky, V.G., Kolchanov, N.A., Protopopov, A.I., Kashuba, V.I., Kisselev, L.L., Wasserman, W., Wahlestedt, C. and Zabarovsky, E.R. Kisselev, L.L., Wasserman, W., Wahlestedt, C. and Zabarovsky, E.R. Kotl flanking sequences: a tool for gene discovery and verificat
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Zabarovsky, E.R.
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of the human
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                                                                         Similarity
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                                                           Conservative
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                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="NL4~BI20RS"
                                                                                                                                                                                                           Location/Qualifiers
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                                                         Score 325.8; DB 9;
Pred. No. 9.2e-49;
0; Mismatches 32;
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Submitted (27-OCT-2000) Genetics
Road, Andover, MA 01810, USA
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1 (bases 1 to 809)
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// Adb_
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<1. .>809
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/codon_start=3
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/db_xref="taxon:9986"
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                                                                                                                18.2%;
                                                                                           Score 275.6; Pred. No. 9.5e
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                                                                                                                                                                                                                                                                   OS Homo sapiens (human)
PN JP 2001017183-A/4
PD 23-JAN-2001
PF 09-JUL-1999 JP 1999196584
PR NOBORU YAMAJI, KOICHI NISHIMURA, MIHO SASAMATA
PI NOBORU YAMAJI, KOICHI NISHIMURA, MIHO SASAMATA
PC C12N15/09,C07K16/40,C12N1/15,C12N1/19,C12N1/21,C12N5/10, PC
C12N9/50,C12Q1/37,
PC C12N15/00,C12N5/00
CC
FH Key Location/Qualifiers
FT source /organism='Homo sapiens (human)'.
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                                                             TGGACGGTAGTCCCCGCTCTCTGGCTGTCTTTGACCTCTGTGGGGGTCTCGACGGCTTCT 482
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                                                TGAATGGCGATCCCAGCTCGGCTGCCGCCCTCAGCCTCTGCGAGGGCGTGCGCGGCGCCT
                                                                                                CCGGGTCCGAGACGCCGCTTCCGGAAACCGACCTGGCGCACTGCTTCTACTCCGGCACCG 334
E58656
E58656.1
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Yamaji.N., Nishimura,K. and Sasamata,M. Novel metallic protease Patent: JP 2001011183-A 4 23-JAN-2001; YAMANOUCHI PHARMACEUT CO LTD
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Novel |
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/db_xref="taxon:9606"
734 c 816 g 59
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Pred. No. 2.9e-38;
D; Mismatches 505
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                                                                                                                  CTCAGAATCCCATACAG
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             Homo sapiens METH1 protein AF060152 AF060152.1 GI:5725505
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AGGGCTTCAGCTTCGAGGCCCTGCCGCCGCGCGCGCGAGCTGCGAAACCCCCCGCGTCCACAC
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SOURCE
ORGANISM
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Best Local Similarity
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                                      AAGAAAAGGGGCGCGTGTACGGGGATGGGTCCGCACGGATCCTGCACGTCTACACCCGGG
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Vazquez,F., Hastings,G., Ortega,M.-A., Oikemus,S. and Iruela-Arispe,M.L.
Direct Submission
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 3430)
Vazquez,F., Hastings,G., Ortega,M.A., Lane,T.F., Oikemus,S.,
Lombardo,M. and Iruela-Arispe,M.L.
METH-1, a human ortholog of ADAMTS-1, and METH-2 are members
new family of proteins with angio-inhibitory activity
J. Biol. Chem. 274 (33), 23349-23357 (1999)
93367466
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LQGVCQPTGTGSIRKKREVSSHRYVETMLVADQSMAEHEGSGLKHYLLTLESVAARLY
KHPSIRNSVSLVVVKILVIHDEQKGPEVTSNAALTLRNECNWQKQHNPPSDRDAEHYD
TAILETRQDLCGSQTCDTLGMADVGTVCDPSRSCSVIEDDGLQAAFTTAHELGHVFNM
PHDDAKQCASLNGVNQDSHMMASMLSNLDHSQPWSPCSAYMITSFLDNGHGECLMDKP
QNPIQLPGDLFGTSYDANRQCQOTTFGEDSKHCPDSTCSTLWCTGTSGGVLVCQTKH
FFWADGTSCGEGKWCZINGKCVNKTDRKHEDTPPHGSWGMWGPWGDCSRTCGGGVQYTM
RECDNPVPKNGGKYCEGKRVRYRSCNLEDCPDNNGKTFREEQCEAHNEFSKASFGSGP
AVEWIFKYAGYSPKDRCKLICQAKGIGYFFVLQFKVDGTPCSPDSTSVCVQGQCVXA
GCDRIIDSKKKFDKCGCGGGGSTCKKISGSVTSAKFGYHDITIPTGATNIEVKQRN
QRGSRNNGSFLAIKAADGTYLINGDYTLSTLEQDIMYKGVVLRYSGSSAALERIRSFS
PLKEPLTIQVLTVGNALRPKIKYTFYKKKKESFNAIFTSSAWIEEWGECSKSCELG
PLKEPLTIQVLTVGNALRPKIKYTFYKKKKESFNAIFTSSAWIEEWGECSKSCELG
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SLKCLSHDGGVLSHESCDPLKKPKHFIDFCTMAECS*
1 845 c 971 g 736 t 1 others
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VPELERAPGHGTTRLRLHAFDQQLDLELRPDSSFLAPGFTLQNVGRKSGSETPLPETD
LAHCTYSGTVWGDPSSAAALSLCEGVRGAFYLLGEAYFTQPLPAASERLATAAPGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product="METH1 protein"
/protein_id="AAD48080.1"
/db_xref="GI:5725506"
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domains"
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/db_xref="taxon:9606"
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                                                                    Novel integrin ligand E29406 E29406 E29406 J GI:13025553 JP 1999018784-A/1. unidentified.
1 (bases 1 to 4014)
Zudenka,L.J., Steven,H.T., Jamu
Novel integrin ligand ITGL-TSP
                                                         unidentified
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                                                                                                                                                                                           Genetics Center, Avia Castelldefels, Llobregat, Barcelona 08907, Spain
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                                                                                                                                                                                                                          Submitted (19-JUL-1999) Molecular
                                                                                                                                                                                                                                                     Casas, C., Pritchard, M.A., Estivill, X. and Arbones, M.L.
                                                                                                                                                                                                                                                                                                              Casas, C., Pritchard, M.A., Cloning, characterization
                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 4447)
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/codon_start=1
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οy В 밁 õ 뫄 õ 밁 Ş 밁 Ş 밁 Ş 8 Ş 밁 Ş 8 Ş 멍 Ş 8 Ş Query Match Best Local S Matches 586; 1222 1102 1042 963 903 843 982 783 928 723 838 663 808 603 748 543 889 483 628 423 568 363 CAGGAGGCGGGACGAGTGCGCCCTGGCGCCACCGGAGCCACTGCTTCTATCGGGGCACAG 422 TCACTCTGCGGAACTTTTGCAACTGGCAGAAGCAGCACACCCAGCGAGTGACCGGGATG TGAAGGTGGTGGTAGGCGACAAGGACCAAGAGCCTGGAAGTGAGCAAGAACGCTGCCA 1022 CCATCGCCAATAGGCTGTACAGCCATGCTAGCATCGAGAACCACATCCGCCTGGCCGTGG ACGCGTCCATGGCCGGTTGTATGGCCGGGGCCTGCAGCATTACCTGCTGACCCTGGCCT GGCGGCGGCGCGCTCCATCTCCCGGGCCGCCAGGTGGAGCTGCTTCTGGTGGCTG CGGAGGCCCACGAGCATGCTCCGGCGCACAGCACCCGAGCGACGCGCACCACCTGGCCT AAGAAAAGGGGCGCGTGTACGGGATGGGTCCGCACGGATCCTGCACGTCTACACCCGCG TGGACGGTAGTCCCCGCTCTCTGGCTGTCTTTGACCTCTGTGGGGGGTCTCGACGGCTTCT 482 CCACACTCAAGAACTTTTGCAAGTGGCAGCACCAACACAACCAGCTGGGAGATGACCATG CGGTGGCAGCCAGATTGTACAAACACCCCCAGCATTCGTAATTCAGTTAGCCTGGTGGTGG ACCAGTCGATGGCAGAATTCCACGGCAGTGGTCTAAAGCATTACCTTCTCACGTTGTTTT GCATAAGAAAGAAGCGATTTGTGTCCAGTCACCGCTATGTGGAAACCATGCTTGTGGCAG GGTCGCCGCAGGACCCGGCACTGCAAGGCGTAGGACAGCCCACAGGA-----ACTGGAA 981 CGCAGCTCTTGGACCAGTCCGCTCTCTCGCCCGCTGGGGGGCTCAGGACCGCAGACGTGGT GGAAAGCGGAGACCGAAGACGAGGACGAAGGGACTGAGGGCCGAGGACGAAGGGCCTCAGT ATCGGCAGGGCGACGTAGGCGGCACGTGCGGGGTCGTGGACGACGAGCCCCGGCCGACTG CCACCGCCGCCCAGGGGAGAAGCCGCCGGCACCACTACAGTTCCACCTCCTGCGGCGGA TCGCGGTCAAGCACGCGCGCTACACCCTAAAGCCACTGCTGCGCGGACCCTGGGCGGAGG CCGGGTCCGAGACGCCGCTTCCGGAAACCGACCTGCCACTGCTTCTACTCCGGCACCG TGAAGATCTTGGTCATCCACGATGAACAGAAGGGGCCGGAAGTGACCTCCAATGCTGCCC Similarity Conservative 17.6%; 53.4%; 0, Score 267; DB 9; Pred. No. 2.8e-38; 0; Mismatches 505; Length 4447; Indels 9 Gaps 842 1082 1161 1101 902 1041 807 542 962 782 927 867 662 602 747 627 .

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Title: Perfect score:

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Copyright

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Scoring table:

Minimum

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Post-processing: Minimum Match 0%
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Listing first 45 summaries
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APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: AGGRECAN DEGRADING METALLO PROTEASES
FILE REFERENCE: DM6909
CURRENT APPLICATION NUMBER: US/09/122,126B
CURRENT FILING-DATE: 1998-07-24
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Best Local Similarity
Matches 1331; Conserv
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SEQ ID NO 1
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US-09-434-288-4
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Sequence 58, Application Patent No. 6426186 GENERAL INFORMATION:
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APPLICANT: Jones, Karen A.
APPLICANT: Volkmuth, Wayne
APPLICANT: Walker, Michael G.
TITLE OF INVENTION: BONE REMODELING GENES
FILE REFERENCE: PB-0014 US
CURRENT APPLICATION UNMBER: US/09/484,970B
CURRENT FILING DATE: 2000-01-18
NUMBER OF SEQ ID NOS: 172
SOFTWARE: PERL Program
SEQ ID NO 58
LENGTH: 3706
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; LOCATION: 3634, 363
; OTHER INFORMATION:
US-09-484-970B-58
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Best Local S
Matches 457
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OTHER INFORMATION: Incyte
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                                                                                                                                                                                           CCTCTCGCCATGTCATGGCCCCTGTGATGGCTCATGTGGATCCTGAGGAGCCCTGGTCCC 1225
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457; Conser
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Pred. No. 1.4e-60;
0; Mismatches 273;
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US-09-130-491-1
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Best Local
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TITLE OF INVENTION: TANGO-71, TANGO-73, TANGO-74, TANGO-76, AND TANGO-83
FILE REFERENCE: 99404/041001
CURRENT APPLICATION NUMBER: US/09/130,491
CURRENT FILING DATE: 1998-08-07
EARLIER APPLICATION NUMBER: US 60/058,108
EARLIER FILING DATE: 1997-09-05
EARLIER FILING DATE: 1997-09-05
EARLIER APPLICATION NUMBER: US 60/054,961
EARLIER FILING DATE: 1997-08-06
NUMBER OF SEQ ID NOS: 16
SOFTWARE: FastSEQ for Windows Version 3.0
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TYPE: DNA
ORGANISM: Homo sapiens
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                                                     TGTTTAACATGCCACATGATGATGCAAAGCAGTGTGCCAGCCTTAATGG---TGTGAACC
                                                                                    TCTTCAACATGCTCCATGACAACTCCAAGCCATGCATCAGTTTGAATGGGCCCTTTGAGCA 1165
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Pred. No. 1.6e-60;
""smatches 273;
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: LOCATION: (1)...(4858)
: OTHER INFORMATION: reprolysin (#
: NAME/KEY: misc_feature
: LOCATION: (1)...(4858)
: OTHER INFORMATION: n = A,T,C or
US-09-392-184-1
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US-09-392-184-1
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CURRENT FILING DATE: 1999-09-09
NUMBER OF SEQ ID NOS: 33
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 1
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Patent No. 6395889
GENERAL INFORMATION:
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Best Local Similarity
Matches 458; Conserv
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TITLE OF INVENTION: NUCLEIC ACID MOLECULES
TITLE OF INVENTION: PROTEASE HOMOLOGS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
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Pred. No. 3.5e-58;
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NAME/KEY: CDS
LOCATION: (278)..(2992)
NAME/KEY: misc_feature
LOCATION: (3636)
OTHER INFORMATION: n = T
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Best Local S
Matches 414
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE:
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APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICATION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION UMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Mus musculus ADAMTS-8
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Local Similarity 63.1%;
nes 414; Conservative
                 CTGCGCAGCTTCTGTGCCTGGCAGCGGGGCCTCAACACCCCTGAGGACTCGGACCCTGAC
                                                                                                                                                                                                                    TCCATGGCTGCCTTCTATGGGACCGACCTGCAGAACCACATCCTCACGGTGATGTCAATG 1065
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                                                                                                          CTAGTGATCCTGGGGTCAGGCGAGGAGGGGCCCCAAGTGGGGGCCCAGTGCTGCCCAGACC 873
                                                                                                                                                                 GCAGCCAAGGCCTTCAAGCACCCCAAGCATCCGCAATCCTGTCAGCTTGGTGGTGACTCGG
                                                                                                                                                                                                                                       AAGATGGCCGCATTCCACGGTGCGGGGCTAAAGCGCTACCTGCTAACAGTGATGGCAGCA 753
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                                                                                                                                              GCAGCCCGAATCTACAAGCACCCGAGCATCAGGAACTCCGTCAACCTTGTGGTGGTGAAA 1129
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US-09-392-184-7/c
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 7, Application US/09392184
Patent No. 6395889
GENERAL INFORMATION:
APPLICANT: Robison, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 399;
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CURRENT FILING DATE: 1999-09-09
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TITLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING
TITLE OF INVENTION: PROTEASE HOMOLOGS
FILE REFERENCE: 5800-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature LOCATION: (1)...(3126)
OTHER INFORMATION: reprolysin (ADAM family of metalloprotease)
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Local Similarity 62.6%;
                     CCCTGCGCAGCTTCTGTGCCTGGCAGCGGGGCCTCAACACCCCTGAGGACTCGGACCCTG 931
                                                                                                                                                                 TGGCAGCCCGAATCTACAAGCACCCCAGCATCAAGAATTCCATCAACCTGATGGTGGTAA 2474
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  CACTGCGTAACTTCTGCAACTGGCAGCGGCGTTTCAACCAGCCCAGCGACCGCCACCCAG
                                                                                                                                                                                                         CAGCAGCCAAGGCCTTCAAGCACCCAAGCATCCGCAATCCTGTCAGCTTGGTGGTGACTC 811
                                                                                                                                                                                                                                                    CGTCCATGGCTGCCTTCTACGGGGCCGACCTGCAGAACCACATCCTGACGTTAATGTCTG
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                                                                                AAGTGCTGATCGTAGAAGATGAAAAATGGGGCCCAGAGGTGTCCGACAATGGGGGGCTTA 2414
                                                                                                           AGTGCCCGCTTCATCACTGACTTCCTGGACAATGGCTATGGGCACTGTCTCTTAGA 1286
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Pred. No. 4.8e-49;
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GENERAL INFORMATION:
APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zi
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 199-08-06
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
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US-09-369-364A-10
; Sequence 10, Application US/09369364A
""" arent No. 6391610
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LENGTH: 739
TYPE: DNA
ORGANISM: Homo sapiens ADAMTS-8
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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NAME/KEY: CDS
LOCATION: (3)..(737)
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                                 CCCTGCGCAGCTTCTGTGCCTGGCAGCGGGGCCTCAACACCCCTGAGGACTCGGACCCTG 931
                                                                                            GGCTAGTGATCCTGGGGTCAGGCGAGGGGGGCCCCAAGTGGGGGCCCAGTGCTGCCCAGA 871
                                                                                                                                          TGGCAGCCCGAATCTACAAGCACCCCAGCATCAAGAATTCCATCAACCTGATGGTGGTAA
                                                                                                                                                               CAGCAGCCAAGGCCTTCAAGCACCCAAGCATCCGCAATCCTGTCAGCTTGGTGACTC
                                                                                                                                                                                                              CGTCCATGGCTTCTACGGGGCCGACCTGCAGAACCACATCCTGACGTTAATGTCTG
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CACTGCGTAACTTCTGCAACTGGCAGCGGCGTTTCAACCAGCCCAGCGACCGCCACCCAG
                                                                     AAGTGCTGATCGTAGAAGATGAAAAATGGGGCCCAGAGGTGTCCGACAATGGGGGGCCTTA
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; LOCATION: (18)..(2810)
US-09-369-364A-1
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SEQ ID NO 1
LENGTH: 3002
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APPLICANT: Apte, Suncel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/509/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
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Best Local Similarity
Matches 355; Conserv
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ORGANISM: mus musculus ADAMTS-5
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                                                                                                                    GAGGTGAGCAAGAATGCGGCCACGACCCTCAAGAACTTTTGCAAATGGCAGCACCAACAT 1061
                                                                                                                                                           CAAGTGGGGCCCAGTGCCCAGACCCTGCGCAGCTTCTGTGCCTGGCAGCGGGCCTC
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GACCTGTGTGGAGTCTCCACTTGCGACACGCTGGGTATGGCTGATGTGGGCACCGTCTGT
                                         AACCAGCTAGGGGATGATCACGAAGAGCACTACGATGCAGCCATCCTGTTCACCCGAGAG
                                                                            AACACCCCTGAGGACTCGGACCCTGACCACTTTGACAGAGCCATTCTGTTTACCCGTCAG
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Pred. No. 8.3e-36;
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; NAME/KEY: CDS
; LOCATION: (121)..(2910)
US-09-122-126B-14
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CURRENT FILING DATE: 1998-07-24
NUMBER OF SEQ ID NOS: 21
SOFTWARE: PatentIn version 3.0
SEQ ID NO 14
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Best Local Similarity
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TYPE: DNA
ORGANISM: Homo :
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TITLE OF INVENTION: AGGRE
FILE REFERENCE: DM6909
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TTCTGTGCCTGGCAGCGGGCCTCAACACCCCCTGAGGACCTCGGACCCTGACCACTTTGAC
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                                                              TTTTGCAAGTGGCAGCACCAACCAACCAGCTGGGAGATGACCATGAGGAGCACTACGAT
                                                                                                                          CTAGGCGACAAGGACAAGAGCCTGGAAGTGAGCAAGAACGCTGCCACCACCACACTCAAGAAC
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Pred. No. 1.3e-34;
0; Mismatches 287;
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CURRENT APPLICATION NUMBER: US/09/392,184
CURRENT FILING DATE: 1999-09-09
NUMBER OF SEQ ID NOS: 33
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 5357
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Best Local
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TITLE OF INVENTION: NUCLEIC ACID MOLECULES
TITLE OF INVENTION: PROTEASE HOMOLOGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Homo :
FEATURE:
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OTHER INFORMATION: n = A,T,C c
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Pred. No. 5.7e-25;
0; Mismatches 271;
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; LOCATION: (13)..(3003)
US-09-369-364A-6
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US-09-369-364A-6
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APPLICANT: Apte, S
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SEQ ID NO 6
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Best Local :
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APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
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TYPE: DNA
ORGANISM: Homo
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Local Similarity 54.4%;
nes 345; Conservative
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                 GACCTGTGTGGGAGTCTCCA-----CTTGCGACACGCTGGGTATGGCTGATGTGGGCACC 1020
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GACCTGTGTGCAGCCATGAACCGGCCCTGTGAGACCCTGGGACTGTCCCATGTGGCGGGC
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US-09-392-184-6
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; LCCATION: (1)...(703)
; OTHER INFORMATION: n = A,T,C
US-09-392-184-6
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APPLICANT: RODISON, Keith E.
APPLICANT: NUCLEIC ACID MOLECULES
TITLE OF INVENTION: PROTEASE HOMOLOGS
FILE REFERENCE: 5800-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 9.7%;
Best Local Similarity 65.0%;
Matches 212; Conservative
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CURRENT FILING DATE: 1999-09-09
NUMBER OF SEQ ID NOS: 33
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LOCATION: (1)...(703)
OTHER INFORMATION: reprolysin (ADAM family
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ORGANISM: Homo sapiens
FEATURE:
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                                                                                                                                                                                                                                                                                                                        1048 ATTGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCTGCTCATGAACTGGGTCATGTC 1107
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                                     TGCAGCGCCATGTATCTCACAGAGCTTCTGGACGGCGGCACGGAGACTGTCTCCTGCAT 310
                                                                  TGCAGTGCCCGCTTCATCACTGACTTCCTGGACAATGGCTATGGGCACTGTCTCTTAGAC 128
                                                                                                                                                TCTCGCCATGTCATGGCCCCTGTGATGGCTCATGTGGATCCTGAGGAGCCCTGGTCCCCC 1227
                                                                                                                                                                                                              CTCAGCATGCCCCACGACGACTCCAAGCCCTGCACACGGCTCTTCGGGCCCATGGGCA--
                                                                                                                                                                                                                                                                                                GTGATCGAGGATGAGGGGCCTCCAGGCGGCCCACACCCTGGCCCATGAACTAGGGCACGTC 133
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AAACCAGAGGCTCCATTGCATCTGCC 1313
                                                                                                                            -AGCACCACGTGATGGCACCGCTGTTCGTCCACCTGAACCAGACGCTGCCCTTGGTCCCCC
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Pred. No. 5.1e-24;
0; Mismatches 111;
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; NAME/KEY: CDS
; LOCATION: (2)..(2623)
US-09-369-364A-14
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Best Local S
Matches 358
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TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 3
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TYPE: DNA
ORGANISM: Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
TGAGGAGCCCTGGTCCCCCTGCAGTGCCCGCTTCATCACTGACTTCCTGGACAATGGCTA 1268
                                     AGAAGAAGGAGTTAAGAGTCCCCAGCATGTCATGGCACCAACACTGAACTTCTACACCAA 930
                                                         GAATGGGCCTTTGAGCACCTCTCGCCATGTCATGGCCCCTGTGATGGCTCATGTGGATCC 120
                                                                                                                                                                             CCCCTACCGAAGCTGTTCCATTAGTGAAGACAGTGGGCTGAGCACAGCTTTCACAATAGC
                                                                                                                                                                                                                                                GGTGATGGTGGCGGACCACAGGATGGTTTTATACCACGGAGCAAACCTTCAACATTA 465
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                                                                                                                         TCATGAACTGGGTCATGTCTTCAACATGCTCCATGAACACTCCAAGCCATGCATCAGTTT 1148
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                                                                                                       TCACGAGCTGGGCCATGTGTTTAATATGCCTCACGATGACAGCAATAAATGCA-----A 870
                                                                                                                                                                                                              CCCGGCTCGGAGCTGTGCCATTGTGGAGGATGATGGGCCTCCAGTCAGCCTTCACTGCTGC 1088
                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGCCCAGTGCTGCCCAGACCCTGCGCAGCTTCTGTGCCTGGCAGCGGGGCCTCAACAC 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTCAGCTTGGTGGTGACTCGGCTAGTGATCCTGGGGTCAGGCGAGGAGGGGCCCCAAGT 851
                                                                                                                                                                                                                                                                                                                AAAGAACTACTTGGGTGGGATTCAGCACGACACAGCCGTTCTGGTCACAAGGGAAGATAT
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Hurskainen, Tiina L.
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Pred. No. 9.7e-22;
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US-09-369-364A-12
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Best Local Similarity
Matches 345; Conserv
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SEQ ID NO 12
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LOCATION: (3)..(5648)
NAME/KEY: misc_feature
LOCATION: (1406)
OTHER INFORMATION: n=T
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APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/4007/10-30-00
CURRENT APPLICATION NUMBER: US/09/369,364A
CURRENT FILING DATE: 1999-08-06
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ORGANISM: Homo
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LOCATION: (1563)
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                                                                                                            AAATGTGATACCTTAGGCCTGGCTGAACTGGGAACCATTTGTGATCCCTATAGAAGCTGT
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                                                                                                                                                                                                                                                                                                                                     GTGAACTTAATTGTGATTCATAATGAACAGGATGGGCCTTCCATATCTTTTAATGCTCAG
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GTCTTCAACATGCTCCATGACAACTCCAAGCCATGCATCAGTTTGAATGGGCCTTTGAGC
                                                                     GCCATTGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCTGCTCATGAACTGGGTCAT
                                                                                                                                                                                                           ACAACATTAAAAAACTTTTGCCAGTGGCAGCATTCGAACAGTCCAGGTGGAAT-----
                                                                                                                                ACTTGCGACACGCTGGGTATGGCTGATGTGGGCACCGTCTGTGACCCGGCTCGGAGCTGT
                                                                                                                                                                                      ----CCATCATGATACTGCTGTTCTCTTAACAAGACAGGATATCTGCAGAGCTCACGAC
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Pred. No. 2.2e-18;
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Search completed: April 26, 2003, 05:36:01 Job time: 113.23 secs
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SEQ ID NO 23

LENGTH: 385

TYPE: DNA

ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(385)

OTHER INFORMATION: pcnp (procollagen N-proteinase)
US-09-392-184-23
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Sequence 23, Application US/09392184
Patent NO. 6395889
GENERAL INFORMATION:
APPLICANT: Robison, Keith E.
FITTLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING HUMAN TIPLE OF INVENTION: PROTEASE HOMOLOGS
FILE REFERENCE: 5800-55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/392,184
CURRENT FILING DATE: 1999-09-09
NUMBER OF SECITORS: 33
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1332 AACGAACCTGA 1342
                                                                                                                                                                                                                                   1272 AAGTGTAGTCGAAAATATATCACTGAGTTTTTAGACACTGGTTATGGCGAGTGTTTGCTT 1331
                                                                                                    1124 ACAACTCCAAGCCATGCA 1141
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                                                                                                                                                                                                        Location/Qualifiers 400..2914
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polynucleotide encoding novel members of a disintegrin, metalloproteinase and thrombospondin domain protein family used prevent and treat Alzheimer's disease, cancer and autoimmune dis
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                                                                                                                                                                                                                                                                                                           Human; aggrecan degrading metalloprotease; cartilage; proteoglycan; interglobular domain; matrix metalloprotease; bovine; interleukin-1 primer; PCR; amplification; inhibitor; cleavage; inhibitor; ADMP; sarthritis; joint injury; pseudogout.
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This sequence represents the coding region for the human aggrecan CC degrading metalloprotease 1 (ADMP-1). ADMP-1 and ADMP-2 (AAX00726) are CC novel proteases that cleave the aggrecan (a major cartilage CC proteoglycan) between residues Glu373-Ala374 of the interglobular domain CC (compared with cleavage between Asn341-Phe342 by the matrix CC metalloproteases MMP-1, -2, -3, -7, -8, -9 and -13). ADMP-1 and ADMP-2 CC were isolated and purified from the conditioned media of bovine nasal CC cartilage stimulated by interleukin-lbeta. The purified proteins were CC partially sequenced and primers were synthesised based on the resultant CC amino acid sequences (AAX00727-X00732 for ADMP-1 and AAX00733-X00736 for CC ADMP-2). These were used to isolate the corresponding genes from cDNA. CC The ADMP polypeptides can be used for identifying inhibitors of ADMP CC activity which would prevent cleavage of the aggrecan core protein, CC thereby decreasing the loss of aggrecan from cartilage. Such inhibitors CC can be used for treating diseases such as osteoarthritis, joint injury, reactive arithits, acute pyrophosphate arthritis (pseudogout), psoriatic or arthritis and invanila rhammatoid arthritis (pseudogout), psoriatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 1331;
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25-JUL-1997;
15-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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DB; AAW75425.
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Solomon KA,
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llarity 98.4%;
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                                                                     GCTCATGAACTGGGTCATGTCTTCAACATGCTCCATGACAACTCCAAGCCATGCATCAGT
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Human DNA encoding

PRO

polypeptide sequence

#176

dog; cat; pig; goat; rabbit; tumour necrosis factor alpha; TNF-alpha; blood; chondrocyte cell; cell proliferation; cell differentiation; co adrenal; lung; breast; prostate: rectum correct liferation.

genetic disorder;

colon;

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11 APR 2000

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17 MAY 2000

22 MAY 2000

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21-APR-2000
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Sequences AAS45925-AAS46231 represent DNA molecules encoding and PCR primers for PRO polypeptides of the invention. The sequences of the invention can be used to detect the presence of a tumour in a mammal
                                           Claim
                                                            Novel nucleic acids encoding PRO polypeptides, used to diagnose the presence of tumours, such as prostate and breast tumours, in mammals to screen for modulators of the compounds
                                                                                                                                                     Baker
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2000US-199397P.
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2000WO-US20710.
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Matches 1330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               comparing the level of expression of a PRO polypeptide in a test sample of cells from the animal and a control sample of normal cells, whereby a higher level of expression in the test sample indicates the presence of a tumour in the mammal. Mammals include dogs, cats, cattle, horses, sheep, pigs, goats and rabbits but are preferably human. The polypeptides can be used to stimulate tumour necrosis factor (TNF) alpha release from human blood, when contacted with it. A specific polypeptide can be used to stimulate the proliferation or differentiation of chondrocyte cells. The PRO proteins can be used to determine the presence of tumours and also susceptibility to tumour development, particularly adrenal, lung, colon, breast, prostate, rectal, cervical, or liver tumours, in mammalian subjects. The oligonucleotide probes specific for the PRO nucleic acids can be used for genetic analysis of individuals with genetic disorders.
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                                            The present invention relates to secreted and transmembrane proteins. These proteins and the DNA encoding them may be used as hybridization probes, in chromosome and gene mapping and in the generation of anti-sense RNA and DNA. They may also be used used to generate either transgenic animals or knockout animals which are in turn useful for development and screening of therapeutically useful reagents. The nucleic acids may also be used in gene therapy.
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GACCCGGCTCGGAGCTGTGCCATTGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCT
                  GACCCGGCTCGGAGCTGTGCCATTGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCT 1086
                                    AACACCCCTGAGGACTCGGACCCTGACCACTTTGACAGCAGCCATTCTGTTTACCCGTCAG
                                                                                                                                                              AATCCTGTCAGCTTGGTGGTGACTCGGCTAGTGATCCTGGGGTCAGGCGAGGAGGGGCCC
                                                                                                                                                                                        CGCTACCTGCTAACAGTGATGGCAGCAGCAGCCAGGCCTTCAAGCACCCCAAGCATCCGC
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                                                                                                                    can be used
                                                                                                                                                                                                   Claim 1;
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                      Local
                                                                                                                present sequence is the coding sequence for a protein with recanase activity. This sequence is rat-derived. The coding be used in the preparation of drugs to treat Alzheimer's d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aggrecanase
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DB; AAM48394.
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    607;
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                                                                                                                                                                                                                                                             ne, exhibiting is useful in t
                                                                                                                                                                                                 Page 13-16; 18pp; Japanese
    Conservative
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Alzheimer's
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disease.
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В
                                                                                                              Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; ds; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS;
                                                                          cognitive disorder; schizophrenia; prostate; obesity; osteociosteoporosis; arthritis; testis; lung; thyroiditis; thyroid; endocrine; metabolism; regulation; malabsorption; gastritis;
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17-DEC-1998 WO9856804-A1 Homo sapiens

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                                                                                                              Query Match
Best Local
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                                                                                                                                                conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polynucleotides. Specific uses are described for each of the 86 polynucleotides, based on which tissues they are most highly expressed on the polynucleotides.
                                                                                                                                                                                                                   This sequence represents a nucleic acid molecule which encodes a secreted human protein. The gene number, and the clone it is derived from, are detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoglobu. Fr portion (e.g. AAX04302) for increasing the stability of the fused protein as compared to the human protein only.

The invention relates to 86 novel genes and their fragments (nucleic acid sequences: AAX04311-X04410; amino acid sequences AAX078126-W78225) which are useful for preventing, treating or ameliorating medical conditions as a few protein or gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                          New isolated human genes and the secreted polypeptides they encode useful for diagnosis and treatment of e.g. cancers, neurological disorders, immune diseases, inflammation or blood disorders
                                                                                                              Sequence 4712 BP;
                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 228-230; 380pp; English.
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P-PSDB; AAW78189.
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                                                                                                                                                                        A Disintegrin
                                                                                                                                                                                         Human; MDTS4;
                                                                                                                                                                                                                   Human ADAM-type metalloprotease MDTS4-encoding cDNA, SEQ
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                                                                                                                                                                        ADAM-type metalloprotease; drug screening; And Metalloprotease; cancer; arthritis; ss
                                                                                                 Location/Qualifiers
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                                                   /product=."Human MDTS4"
/note= "ADAM-type metalloprotease"
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Pred. No. 2.6
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                           CC AAZ32000 and AAZ32001 encode, and AAY49501 and AAY49502 represent, human CC metalloprotease thrombospondin (METH) proteins METH1 and METH2 CC respectively. METH1 and METH2 have been found to be potent inhibitors of CC anglogenesis both in vitro and in vivo. They can be used for treating CC cancer and other disorders related to anglogenesis including abnormal CC wound healing, inflammation, rheumatoid arthritis, psoriasis, cc endometrial bleeding disorders, diabetic retinopathy, some forms of CC macula degeneration, haemangiomas, and arterial-venous malformations. They may be useful in treating deficiencies or disorders of the immune CC system, by activating or inhibiting the prolliferation, differentiation, or mobilisation (chemotaxis) of immune cells. The etiology of these CC immune deficiencies or disorders may be genetic, somatic, such as CC cancer or some autoimmune disorders may be genetic, somatic, such as CC cancer or some autoimmune disorders may be used to treat inflammatory cc conditions, both chronic and acute conditions. The products can also be used for detection and diagnosis. AAZ32002 to AAZ32000, and AAZ49503 to AAZ49501 represent sequences given in the exemplification of the present
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(HAST/)
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                                                                                                                                                                                                                                                                                                                                                                    Claim 3;
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Human: METH1; metalloprotease; thrombospondin; angiogenesis inhibition; cancer therapy; benign tumour; ocular angiogenic disease; rheumatold arthritis; psoriasis; wound healing; endometriosis; vasculogenesis; granulation; hypertrophic scar; nonunion fracture;
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CAGACCAGTCGATGGCAGAATTCCACGGCAGTGGTCTAAAGCATTACCTTCTCACGTTGT

GACCCCGAAGAGCCAAGCGCTTTGCTTCACTGAGTAGATTTGTGGAGACACTGGTGGTGG 685

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Query Match Best Local S Matches 457

al Similarity 457; Conser

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Pred. No. 2.7e); Mismatches Score

280.2; No. 2.7

2.7e-DВ 273;

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The present sequence is the coding sequence of human METH1 (ME for metalloprotease and TH for thrombospondin), METH1 can be used for inhibiting angiogenesis in an individual, and for treating cancer, beniq tumours, an ocular angiogenic disease, rheumatoid arthritis, psoriasis, delayed wound healing, endometriosis, vasculogenesis, granulations, hypertrophic scars, nonunion fractures, scleroderma, trachoma, vascular adhesions, myocardial angiogenesis, coronary collaterals, cerebral collaterals, arteriovenous malformations, ischaemic limb angiogenesis, osler-Mebber syndrome, plaque neovascularisation, telangiectasia, haemophiliac joints, angiofibroma, fibromuscular dysplasia, wound granulation, Crohn's disease or atherosclerosis METH1 can also be used in birth control. METH1 can also be used in diagnostic methods for the prognossis of cancer. The METH1 gene is located on chromosome 21q21.
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20-JUL-1999;
10-AUG-1999;
13-AUG-1999;
22-DEC-1999;
22-FEB-2000;
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(SMIK )
(BETH-)
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JONAK Z L.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This cDNA encodes a human integrin ligand polypeptide ITGL-TSP. ITGL-TSP polypeptides can be used in the treatment of anglogenic diseases such as cancer, cancer metastasis, chronic inflammatory disorders, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 5; Pages 6-9; 24pp;
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RESULT 13
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                                                        Query Match
                                     Best Local Similarity
Matches 457; Conserv
  1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1919
                                                                           Sequence 4676 BP;
                                                                                                             The present sequence encodes human Tango-71. Tango polypeptides are useful for identifying compounds which bind the polypeptide via direct binding, competition binding assays or Tango-71, -73, -74, 76 or -83-mediated signal transduction. Tango polypeptides are also useful for identifying modulating compounds by determining effect on Tango activity. Tango polypeptides and nucleic acids are useful for diagnosing diseases related to aberrant expression of Tango, and Tango polypeptides are useful for raising antibodies which can be used in diagnostic assays for
                                                                                                                                                                                                                    New TANGO polypeptides and nucleic acids encoding them - useful diagnostic agents and for treating disorders caused by aberrant expression of TANGO \,
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                                                                                                                                                                                                   Claim 1;
                                                                                                                                                                                                                                                                                                                          05-SEP-1997;
06-AUG-1997;
                                                                                             prevention and
                                                                                                                                                                                                                                                                    WPI; 1999-167426/14.
                                                                                                                                                                                                                                                                                                                                                     06-AUG-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX19955 standard;
                                                                                                      detection of Tango, and also for generating anti-idiotype antibodies
                                                                                                                                                                                                                                                                                                                                                                        18-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detection;
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                    626
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             luman:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human Tango-71 encoding cDNA
            GACCCCGAAGAGCCAAGCGCTTTGCTTCACTGAGTAGATTTGTGGAGACACTGGTGGTGG 685
ACCGGCAGTGCCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tango-71; Tango-73; Tango-74; Tango-76; Tango-83; diagnosis;
                                                                                                                                                                                                   F1g 1;
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                                       Conservative
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                                                                                             protection
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97US-0054966
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                                                                                                                                                                                                  84 pp;
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                                                                          1247 A; 1097 C; 1253 G; 1079 T; 0 other;
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                                               20.6%;
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                                               Score 280.2;
Pred. No. 3e
                                     Mismatches
                                                3e-59;
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                                                       Length
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           WO200134785-A1.
                                                                                   Homo sapiens
                                                                                                                                  Human
                                                                                                                                                    23-AUG-2001
                                                                                                                                                                        AAH41003;
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                                                                                                                                                                                                                                       ACCGGCAGTGCCA
                                                                                                                                                                                                                                                        AGGGGTAGGTCGA 1358
                                                                                                                                metalloprotease
                                                                                                                                                   (first entry)
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                                                                                                                                  MDTS6
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Metalloprotease; human; aggrecanase; joint disease; osteopathic; antiarthritic; ss.
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/*tag= a
/product= "Metalloprotease"
/note= "Aggrecanase activity
                                                                                  Location/Qualifiers
1..2853
                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA; 2853 BP
                                                                                                                                                                                                                                                                                           CDNA
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This invention relates to a metalloprotease with aggrecanase activity. The invention includes protein and DNA sequences of the metalloprotease, vectors containing the DNA, host cells transformed by the vectors, and antibodies directed against the metalloprotease. The antibodies, protein and DNA sequences can be used in the treatment and prevention of joint and DNA sequences can be used in the treatment and prevention of joint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diseases, particularly osteoarthritis. The treatment may result in osteopathic and antiarthritic activity. The present sequence reprecDNA encoding the metalloprotease termed MDTS6.
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16-MAY-2000; 2000JP-0144020
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DB; AAG62299.
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TTTGAGCACCTCTCGCCATGTCATGGCCCCCTGTGATGGCTCCATGTGGATCCTGAGGAGCC 1217
                                                           GGGTCATGTCTTCAACATGCTCCATGACAACTCCAAGCCATGCATCAGTTTGAATGGGCC 1157
                                                                                                   AGCTGCTCTGTCATTGAGGACGATGGGCTTCCATCAGCCTTCACCACTGCCCACGAGCT
                                                                                                                                GAGCTGTGCCATTGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCTGCTCATGAACT 1097
                                                                                                                                                                            AGTCTCCACTTGCGACACGCTGGGTATGGCTGATGTGGGCACCGTCTGTGACCCGGCTCG
                                                                                                                                                                                                                       GGACTCGGACCCTGACCACTTTGACACAGCCATTCTGTTTAGCCGTCAGGACCTGTGTGG
                                                                                                                                                                                                                                                                                CAATGCGGCCCTGACGCTGCGCAACTTCTGTGCCTGGCAGAAGAAGCTGAACAAAGTGAG
                                                                                                                                                                                                                                                                                                           CAGTGCTGCCCAGACCCTGCGCAGCTTCTGTGCCTGGCAGCGGGGCCTCAACACCCCTGA
                                                                                                                                                                                                                                                                                                                                       CATCGTTGTGGTCAAGGTGCTTGCTTAGAGATCGTGACTCCGGGCCCAAGGTCACCGG
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                                                                                                                                                                                                                                                                                                                                                                                                                              AACAGTGATGGCAGCAGCCAAGGCCTTCAAGCACCCAAGCATCCGCAATCCTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTGGTGGCAGATGACAAGATGGCCGCATTCCACGGTGCGGGGCTAAAGCGCTACCTGCT 737
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                                          GGGCCACGTGTTCAACATGCCCCCATGACAATGTGAAAAGTCTGTGAGGAGGTGTTTGGGAA 1148
                                                                                                                                                             AGCCACCACCTGTGACACCCTGGGCATGGCTGATGTGGGTACCATGTGTGACCCCAAGAG
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Pred. No. 4.5
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                                                                                       NHP polynucleotides are used as hybridisation probes for screening libraries and assessing gene expression patterns. They can also be used for treating related biological disorders such as obesity, high blood pressure, arthritis, connective tissue disorders and infertilit
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                                                  Sequence
                                                                                                                                      The present sequence is a cDNA encoding novel human protein (NHP), human protease. NHPS share structural similarity with animal protea particularly zinc metalloproteases. Sequences of the invention are useful in therapeutic, diagnostic and pharmacogenomic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human;
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                                                                                                                                                                                                    Claim 1; Page 35-36; 41pp; English
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Search completed: April 25, 2003, 16:50:38 Job time: 624.069 secs

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Title:
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SUMMARIES

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ALIGNMENTS

	AUTHORS	REFERENCE			ORGANISM		SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	LOCUS	AB014588	RESULT 1	
Kotani, H., Nomura, N. and Ohara, O.	Ishikawa,K., Nagase,T., Suyama,M., Miyajima,N., Tanaka,A.,	1 (sites)	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Homo sapiens	SK plus clone: HK03410.	Homo sapiens adult male brain cDNA to mRNA, clone_lib:pBluescriptII		AB014588.1 GI:3327189	AB014588	Homo sapiens mRNA for KIAA0688 protein, complete cds.	AB014588 4301 bp mRNA linear PRI 06-FEB-1999			

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (26-MAY-1998) Osamu Ohara, Kazusa DNA Research Institute. Laboratory of DNA Technology; Yana 1532-3, Kisarazu, Chiba 292-0812, Japan (E-mail:cdnainfo@kazusa.or.jp, Tel:+81-438-52-3913.
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Ohara,O., Suyama,M., Nagase,T.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tortorella,M.D., Burn,T.C., Pratta,M.A., Abbaszade,I., Hollis,J.M., Liu,R.-Q., Rosenfeld,S.A., Copeland,R.A., Decicco,C.P., Wynn,R., Rockewell,A., Yang,F., Duke,J.L., Solomon,K., George,H.J., Bruchner,R., Nagase,H., Ito,Y., Ellis,D.M., Ross,O.H., Wiswall,B.H., Murphy,K., Hillman,M.C. Jr., Hollis,G.F., Newton,R.C., Magolda,R.L., Trzaskos,J.M. and Arner,E.C. Direct Submission
Submitted (103-MAY-1999) Applied Biotechnology, DuPont Pharmaceuticals Company, Experimental Station, E336/237B, Wilmington, DE 1980, USA
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/LPSARLASPLPREEELVFPEKLNGSVLPGSGAPARLLCRLQAFGETILLEELEDSGV
QVEGLTVQYLGOAPELLGGAEPGTYLTGTINGPEESVASLHWDGGALLGVLQYRGAEL
HLQPLEGGTPNSAGGFGAHILRKSLPASGGGPMCNVKAPLGSPSRPRRAKFASLSR
FVETLVVADDKMAAFHGAGLKRYLLTVWAAAAKAFKHPSIRNPYSLVVYBLVILGSGE
EGPQVGPSAAQTLRSFCAWQRGLNTPEDSDDPDHFDTAILFTRQDLCGVSTCDTLGMAD
VGTVCDPARSCAIVEDGLQSAFTAAHELGHVFNNLHDMSKPCISLNGPLSTSRHYMA
PVMAHVDPEEDWSPCSARFITDFLDNGYGHCLLDKFEAPLHLPVTFPEGKDYDADBQCQ
LTFGPDSRHCPQLPPPCAALWCSGHLNGHAMCQTKHSPWADGTPCGPAQACMGGRCLH
MDQLODFNIPOAGGWGFWGPWGDCSRTCGGGVQPSSRDCTRPVPRNGGKYCEGRRFRF
RSCWFEDCPFGSALFFREEQCAAVNHRTDLFKSFPGAWDWPRKTGVARQDCKLTCQ
ARALGYYYVLEPRVVDGTPCSPDSSSVCVQGCIHAGCDRIGSKKKFDKGWVCGGDG
SGCSKOSGSFRKFRYGYNNVVTIPAGAPHILVRQQGNPGHRSITLAKLEDGSYALNG
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Best Local Similarity 98.4%;
Matches 1330; Conservative
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Mammalia; Eutheria;
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/db_xref="taxon:9606"
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Smith, V., Watanabe,
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Catarrhini; Hominidae;
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5.4e-277;
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RESULT 4
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LOCUS
DEFINITION

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ACCESSION VERSION KEYWORDS SOURCE ORGANISM

house mouse. Mus musculus

BC027773.1 MGC.

GI:20381316

Mus musculus, Similar to a disintegrin-like and metal (reprolysin type) with thrombospondin type 1 motif, 4 MGC:38401 IMAGE:5345809, mRNA, complete cds. BC027773

ROD 07-AUG-2002 illoprotease 4, clone

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                                                   GCTCATGAACTGGGTCATGTCTTCAACATGCTCCATGACAACTCCAAGCCATGCATCAGT
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                         GACCCGGCTCGGAGCTGTGCCATTGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCT
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Query Match
Best Local
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Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom Sternberg,S.M., Benjamin,B.,
Alkesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Haghighi,P.,
Hansen,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortlum/LLNL at: http://image.llnl.gov Series: IRAK Plate: 55 Row: f Column: 21
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (08-APR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC Project
Contact: MGC he
   Similarity
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LTVQVIJGQAPEMLGGAEDGTVLTGTINGDPESVASIMBOGGALLTGVLGVIGQAPEMLGGAEDGTVLTGTINGDPESVASIMBOGGALLTGVLGVIGQARGAELHLQP
LEGGALNSAGGPGAHLIRRKSPASGQEPMCTVKAPSGSSPSPISRRTREASLSRFVET
LVVADDKMAAFHGTGLKRYLLTVMAAAKAFKHPSIRNPVLLVVTRLVILGSGQEGPQ
VGPSAAQTLRSFCTWQBGLNTPNDSDPDPHDTAILFTRQDLCGVSTCOTLGMADVGTV
CDPARSCAIVEDDGLGASATTAHELGHVFNMLHDDNSRCTNLMGQGGSSRFVMAPVMA
HVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEAPLHLPATFPGKDYDADRQCQLTFG
DSSHCPQLPPCAALMCSGHLMGHAMCQTKHSPWABDGTPCGSSQACWGGRCLHVDQL
KDFNNPQAGGAPWGFWGDCSRTCGGGQVDFSSRDCTTRPVFRNGKYCEBERTTERFSCU
KDFNNPQAGGAPWGFWGDCSRTCGGGQVDFSSRDCTTRPVFRNGKYCEBERTTERFSCU
KDFNNPQAGGAPWGFWGDCSRTCGGGQVDFSSRDCTTRPVFRNGGKYCEBERTTERFSCU
KDFNNPQAGGAPWGFWGDCSRTCGGGQVDFSSRDCTTRPVFRNGGKYCEBERTTERFSCU
KDFNNPQAGGAPWGFWGDCSRTCGGGQVDFSSRDCTTRPVFRNGGKYCEBCTTCQARAL
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                                                                                             KQSGSFKKFRYGYSDVVTIPAGATHILVRQQGGSGLKSIYLALKLSDGSYALNGEYTL
MPSPTDVVLPGAVSLRYSGATAASETLSGHGPLAQPLTLQVLVAGNPQNARLRYSFFV
PRPVPSTPRPPPQDWLQRRAEILKILRKRPWAGRK"
                                                                                                                                                     GYYYVLEPRVADGTPCSPDTSSVCVQGRCIHAGCDRIIGSKKKFDKCMVCGGDGSRCS
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/db_xref="taxon:10090"
/map="FVB/N"
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/db_xref="GI:20381317"
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Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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NIH-MGC Project URL: http://mgc.ncl.nih.gov

Contact: MGC help desk

Email: cgapbs-remail.nih.gov

Tissue Procurement: CLONTECH
CDNA Library Preparation: CLONTECH Laboratories, Inc.
cDNA Library Preparation: CLONTECH Laboratories, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Gen
Center, Stanford University School of Medicine, Stanford, CA
Web site:
http://www-shgc.stanford.edu
Contact: (Dickson, Mark) moddpaxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and M)
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                                                                                                                                                                                                    Clone distribution: MGC clone distribution informat through the I.M.A.G.E. Consortium/LLNL at: http://i Series: IRAL Plate: 36 Row: m Column: 24 This clone was selected for full length sequencing passed the following selection criteria: matched mr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
Submitted (03-JUN-2002) National Institutes of Health
Gene Collection (MGC), Cancer Genomics Office, Nation
Institute, 31 Center Drive, Room 11A03, Bethesda, MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1991)
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/product="Unknown (protein
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                                                                    /note="Vector: 427. .1446
                                                                                            /clone="MGC:22414 IMAGE:4693587"
/tlssue_type="fung"
/clone_lib="NIH_MGC_77"
/lab_host="DH10B"
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/db_xref="taxon:9606"
lation-"MSQTGSHPGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLAS
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RSATT"
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Eukaryota; Metazoa; Chordata; Crania
Bummalia; Eutheria; Primates; Catarr
1 (bases 1 to 10766)
Sawaji,Y., Nagase,H., Saklatvala,J.
ADAMTS-4 genomic locus
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Sawaji, Y., Nagase, H.,
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/note="compared t
/replace="g"
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/LIPSARLASPLPREELYFPEKLNGSVLFGSGAPARLLCRLQARGETLLLELEQDSGV
QVEGLYVQXLGQAPELLGGABEDGTYJTGTI NODPESVASLHWDGGALLGYLQYRGAEL
HLQPLEGGTPNSAGGPGAHILRRKSPASGGPMCNVKAPLGSPSPRPRAKRFASLSR
FVETLVVADDKWAAFHGAGLKRYLLTVWAAAAKAFKHPSIRNPVSLVVTRLVILGSGE
EGPQVGPSAAQTLRSFCAWQRGLNTPEDSDDPDHFDTAILTTRQDLCGVSTCDTIGMAD
VGTVCDPARSCAIVEDGGLQSAFTAAHELGHVFMMLHDNSKPCISLNGVSTSCDTIGMAD
VGTVCDPARSCAIVEDGGLQSAFTAAHELGHVFMMLHDNSKPCISLNGVSTCDTIGMAD
VJAHUQPEEPWSPCSARFITDFLDNGYGHCLLDKFBARHLLFVFFPGXDYDADRQCQ
LTFGPDSRHCPQLPPPCAALWCSGHLNGHAMCOTKHSPWADGTPCGPAQACMGGRCLH
MQQLQDFNIPQAGGWGPMGPWGDCSRTGGGGVQPSSRDCTRPVFRNGKYCGGRRTRF
MSCNTEDCPTGSALTFREECCAAYNHRTDLFKGFPGMDWVPRYTGVARPQDDCKLTCQ
RSCNTEDCPTGSALTFREECCAAYNHRTDLFKGFPGMDWVPRYTGVARPQDDCKLTCQ
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/codon_start=1
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SGCSKQSGSFKKFYGYNNVYT PAGARILVYQQGMPGHRSIYLALKLEDGSYALNG
EYTLMPSPDDVVLPGAVSLRYSGATAASETLSGHGPLAQPLTLQVLVAGNPQDTRLRY
SFFVPRPTPSTPRPTPQDMLHRRAQILEILRRRPWAGRK"
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/db_xref="taxon:9606"
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AL590714
AL590714.27
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                                                                                                                                                                                                       Score 634.4; DB 9;
Pred. No. 3e-128;
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                                                                                                                                                                                                                                          Assembly program: XGAPA; version 4.5
Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 164729 bases at least Q30
Consensus quality: 165466 bases at least Q30
Consensus quality: 165469 bases at least Q20
Insert size: 171878; 3.4% error; agarose-fp
Quality coverage: 8.28x in Q20 bases; sum-of-contigs Quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (17-AUG-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 15A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk on May 7, 2001 this sequence version replaced gi:13751001.
                                                                                                                                                                                                                         coverage: 8.11x in Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center project name: bA137A12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: SC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: Sanger Centre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: humquery@sanger.ac.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Web site: http://www.sanger.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                           NOTE: This is a 'working draft' sequence. It currently consists of 9 contigs. The true order of the pleces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
as soon as it is available and the accession number wil be preserved.
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163261, .167863
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fragment_chain:2"
114979, .126347
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137865. .163160
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/db_xref="taxon:9606"
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fragment_chain:2
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1. .9373
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9473: gap of 100 hr
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39935 c 40002 g
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Rattus no
AB042271
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2 (bases
                                                                                                                                                                 Submitted (27-APR-2000) Kazuki Satoh, Daiichi Pharmaceutical Co.,LTD., Discovery Research Laboratory: 1-16-13 Kita-kasai, Edogawa-ku, Tokyo 134-8630, Japan (E-mail:satohj71@daiichipharm.co.jp, Tel:81-3-36800151(ex.39)
                                                                                                                                                                                                                                                                                                            Satoh,K., Suzuki,N. and Yokota,H. ADAMTS-4 (a disintegrin and metalloproteinase with thrombospondin motifs) is transcriptionally induced in beta-amyloid treated rat
                                                                                                                                                                                                                               Direct Submission
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Satoh, K., Suzuki, N. and Yokota, H.
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                                                                                                                                                          Fax:81-3-56964266)
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                               <u>^</u>
                                      /tissue_type="brain"
/dev_stage="fetus"
                                                                                  /strain="Wistar rats"
/db_xref*"taxon:10116"
/product="ADAMTS-4"
                                                                       /clone="M1"
                                                                                                             /organism="Rattus norvegicus"
              codon_start=1
                                                                                                                                           ocation/Qualifiers
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DTKpvprnggkvcegrrtpffrscurtkncphgsaltfreeqcaaynhrtdlfksfpdb
DWVprytgvaprdockltcqaralg"
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                         TCCAACCCTGCTTGCCGCTTCACACTGTGC-------AGTGGCGGAGGCTGC
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  AACTCCACCTCCAGCCCCTGGAGGGAGGCACCCCTAACTCTGCTGGGGGACCTGGGGCTC
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Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus

1 (bases 1 to 211772)

Deschamps, S., Gu, W. and Roe, B.A.

Mus musculus BAC Clone rp23-395h6

Unpublished
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Submitted (19-FEB-2002) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
OK 73019, USA
ON Feb 19, 2002 this sequence version replaced g1:18390260.
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Submitted (21-NOV-2000)
The University of Oklaho
OK 73019, USA
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The University Of Oklahoma
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Deschamps, S., Gu, W. and
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/clone_lib="RPCI Mouse BAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                       0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 434.8; DB Pred. No. 1e-84;
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VERSION
KEYWORDS
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AUTHORS
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Center Code: PGABERK.
Center Code: PGABERK.

* NOTE: This is a 'working draft' sequence. It currently
* consists of 14 contigs. The true order of the pieces
* consists of 14 contigs. The true order of the pieces
* is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus clone RP23-12J3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
Submitted (23-AUG-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Draft
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Martin,J., Hosseini,R., Peng,Y.,
Cheng,J.~F.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HTG; HTGS_PHASE1; HTGS_DRAFT
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                                                                                                                                                                                                                                                                                                                                                                                   arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                          as soon as it
be preserved.
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(bases 1 to 227141)
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3-12J3, WORKING DRAFT SEQUENCE, 14 unordered
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y of 31617 bp in 1
f unknown length
y of 76738 bp in 1
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of 2216
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of 7367 bp in
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SOURCE ORGANISM

Norway rat. Rattus norvegicus

HTG; HTGS_PHASE1.

Eukaryota; Metazoa; Mammalia; Eutheria;

Chordata; Rodentia;

Craniata; Vertebrata; Sciurognathi; Muridae;

Muridae;

Euteleostomi;
; Murinae;

KEYWORDS

REFERENCE

Rattus

(bases 1 to 84868)

AUTHORS

Muzny,D.M., Adams,C., Adio-Oduola Alsbrooks,S.L., Amaratunge,H.C.,

Adio-Oduola, B., Ali-osman, F.R.,

Are, J.R.,

Ayele, M.,

Allen,C.,

ACCESSION VERSION

AC099236 AC099236.4 GI:21735644

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             DEFINITION
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                                         RESULT 12
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                                                                                                 Db 138015 CTTCTGGGAGCCCGAGTCCCATTTCCCGCAGAACCAAG
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Best Local Similarity
Matches 528; Conserv
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             Rattus norvegicus clone CH230-99J19,
                            AC099236
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46 unordered
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/db_xref="taxon:10090"
/clone="RP23-12J3"
55126 c 53628 g 5755
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Pred. No. 1e-84;
0; Mismatches
       DNA LIHCUL

3. *** SEQUENCING
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             HTG 13-JUL-2002
IN PROGRESS
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Barboria, J., Barton, J., Blangg, K., Blankeaburg, K., Bondin, D., Buck, J., Barke, P., Burkett, C., Burrell, K.L., Byrd, N.C., Burnell, R.L., Byrd, N.C., Cartor, Y., Cartor, Y., Cavezos, S.R., Chacko, J. Chavez, D., Chave
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JOURNAL REFERENCE AUTHORS TITLE

TITLE

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COMMENT

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                                                                                                                                                                                                                                                                                                                                                                                            /product="aggrecanase-1"
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/protein_id="AAK53425.1"
/db_xref="GI:14039921"
/translation="MADWGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSK
PCVGLNGPGSTSCHVMAFVMAHYUDEEDWSPCSARFITDFLDNGYGHCLLDKPEAPLH
LPVTFPGKDYDADRQCQLTFGPDSRHCPQLPPPCAALMCSGHLNGHAMCQTKHSPWAD
GTPCGPAQACMGGRCLHMDQLDEFNIPQAGGW"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and Bos taurus aggrecanase-1
Number AF192770"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="ADAMTS family member; similar to Homo sapiens
aggrecanase-1 encoded by GenBank Accession Number AF148213
and Bos taurus aggrecanase-1 encoded by GenBank Accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cell_type="articular cartilage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Equus caballus"
/db_xref="taxon:9796"
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (07-MAY-1999) Neuroscience, Merrill St., Indianapolis, IN 46285, U Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 4878)
Liu, X. and Little, S.P.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu.X., Tu.Y., Yin.T., Johnstone,E.M., Stephenson,D.T., Clemens,J.A. and Little,S.P. Induction of a disintegrin and metalloprotease with the thrombospondin type I motif (ADAMTS)
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AF149118.1 GI:4929477
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
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WQKQHNSPSDRDFEHYDTALLFTRQDLGCSHTCDTLGKADVGTVCDPSRSCSVLEDDG
LQAAFTTAHELGHVFNNHPHDDAKLASFNGVSGUSHLMASMLASTLDHSQPMSPCSAVL
VTSFLDNGHGECLMDKPONPIKLPSDLPGTLYDANRQCOFTFGEESTHCPDAASTCST
LWCTGTSGGLLVCQTKHFPMADGTSCGEGKWCVSGKCVNKTDMKHFATPVHGSWGPWG
DWGDCSRTCGGGQVQTMRAECDNPPYRNGGKYCEGKKVNKTSKHFEATPVHGSWGPWG
OCEALNEFSKASFGNEPTVEWTPKYAGVSPKDRCKLTCEAKGIGYFFVLQPKVVDGTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    thrombospondin motifs 1"
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MLLCYRGAHGRPTEEDEELVLPSLERARGHDSTTLLRLDAFGQQLHLKLQPDSGFLAP
                                                                                                                                                                                             CSPDSTSVCVQGQCVKAGCDRI IDSKKKFDKCGVCGGNGSTCKK ISGTVTSTRPGYHD IVT IPAGATNI EVKHRNPRGSNNNGSFLAI IRAADGTY ILNGNETLEQDLTYKGTV LRYSGSSAALERIRSSFSPLKEPLTJQVLMVGJIALRPK KKTYTEPKKKTFLEPFNAI PTES EMVIEEMGECSKTCGSGMQRRVVECRD INGHPASECAKEVKPASTRPCADLPCPRMQV
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EFFTQPAPAVATERLVPAEPKEESIAPPRFHILRRRRRGSGGAKCGVMDEETLPTSNS
GRESQNTPDQMPLRNPTPQGAGKPTGPGSIRKKRFVSSPRYVETMLVADQSMADFHGS
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395. .3298
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/dev_stage="10-12 wee
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/strain="Sprague-Dawley"
/db_xref="taxon:10116"
                                                                                                                 /gene="ADAMTS-1"
/note="alternative
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/codon_start=1
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                                                                       Eukaryota; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 2853)
Yamaji,N., Nishimura,K. and Sasamata,M.
Novel metallic protease
Patent: JP 2001017183-A 4 23-JAN-2001;
YAMANOUCHI PHARMACEUT CO LTD
OS Homo sapiens (human)
PN JP 2001017183-A/4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGATGGACAAGCCGCAGAACCCAATCAAGCTCCC 1815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTTAGACAAACCAGAGGCTCCATTGCATCTGCC 1313
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JP 2001017183-A/4.
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YAMAJI, KOICHI NISHIMURA, MIHO
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SASAMATA
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                                                                                                                              CCTGCAGTGCCCGCTTCATCACTGACTTCCTGGACAATGGCCTATGGGCACTGTCTCTTAG 1285
                                                                                                                                                                                       CCTCTCGCCATGTCATGGCCCCTGTGATGGCTCATGTGGATCCTGAGGAGCCCTGGTCCC 1225
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                                                                      ACAAACCAGAGGCTCCATTGCATCTGCCTGTGACTGGGGACTACAAGGACGACGATGACA 1345
                                                                                                                                                                       TEGTGAAGATCTTGGTCATCCACGATGAACAGAAGGGGCCCGGAAGTGACCTCCAATGCTG 925
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                                                                                                               CTTGCAGTGCCTACATGATTACATCATTTCTGGATAATGGTCATGGGGAATGTTTGATGG
                        AGGGGTAGGTCGA 1358
                                                     ACAAGCCTCAGAATCCCATACAGCTCCCAGGCGATCTCCCTGGCACCTCGTACGATGCCA 1402
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CC C2 Location/Qualifiers
FT source 1. 2853
FT source /organism-'Homo sapiens (human)'.
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/db_xref="taxon:9606"
734 c 816 g 59
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Pred. No. 8.3e-51;
0; Mismatches 273;
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Result
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1: sp_archea:*
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Gapop 10.0 , Gapext 0.5
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O8te58 homo sapien
O99154 oryctolagus
O19791 caenorhabdi
O8te56 homo sapien
O8te57 homo sapien
O9w493 drosophila
O8te59 homo sapien
O8w58 homo sapien
O8te59 homo sapien
O8te50 drosophila
O8te60 homo sapien
O9vf61 drosophila
O9vf61 drosophila
O9vf61 drosophila
O9vf61 coturnix co
O12960 xenopus lae
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 xenopus lae
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ALIGNMENTS

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Qy 134 GTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSARILHVY 193	Oy 82 SGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFVPAGGGTSAPWRHRSHCFYR 133	Query Match 29.5%; Score 770.5; DB 4; Length 950; Best Local Similarity 42.8%; Pred. No. 5.1e-54; Matches 180; Conservative 49; Mismatches 133; Indels 59; Gaps 12;	NW INTEGITA; PTOCEASE. SQ SEQUENCE 950 AA; 103286 MW; 5DFBE18285CCCC3B CRC64;		RT "Cloning, expression analysis, and structural characterization of RT seven novel human ADAMTSs, a family of metalloproteinases with		RX MEDLINE=21856482; PubMed=11867212; RA Cal S., Obava A.T., Llamazares M., Garahava C., Onesada V.	RP SEQUENCE FROM N.A.	OX NCBI_TaxID=9606; RN [1]	Homo sapiens (Human).	GN ADAMTS15.	01-JUN-2002 (TrEMBLIEL 21,	01-JUN-2002 (TrEMBLrel. 21,	ID Q8TE58 PRELIMINARY; PRT; 950 AA.	RESULT 1

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Pfam; PF00090; tsp_1; 1.
SMART; SM00209; TsP1; 1.
PROSITE; PS50215; ADAM_MEPRO; 1
PROSITE; PS50092; TSP1; 1.
PROSITE; PS00142; ZINC_PROTEASE
                                                                                                                                                                                                                                                                                                                                                                    Q9GL54 PRELIMINARY; PRT; Q9GL54; Q1-MAR-2001 (TrEMBLrel. 16, Created) Q1-MAR-2001 (TrEMBLrel. 16, Last seq Q1-JUN-2002 (TrEMBLrel. 21, Last ann Aggrecanase-2 (Fragment).
                                                                                                                                                                                                                                             Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AF317415; AAG33062.1; -. HSSP; O9PW35; 1BUD. MEROPS; M12.225; -.
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"Molecular cloning of lapine aggrecanase-2 (ADAMTS-11) from articular chondrocytes.";
                                                                                                                                                                                                                                                                                                                                  Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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InterPro; IPR000884; TSP1.
InterPro; IPR000130; Zn_MTpeptdse
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                                              LMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQILG 482
                              LMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDVPRKQILG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               I 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HDNVKVCEEVFGKLRANHMMSPTLIQIDRANPWSACSAAIITDFLDSGHGDCLLDQPSKP 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLYSHASIENHIRLAVVKVVVLGDKDKSKEVSKNAATTLKNFCKWQHQHNQLGDDHEEHY 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQ 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RRAGFGES---RSRRRSGRAKRFVSIPRYVETLVVADESMVKFHGADLEHYLLTLLATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *AGGSGPQTWWRRRRRS-----ISRARQVELLLVADASMARLYGRGLQHYLLTLASIAN 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QRRG-----VPGGPS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLYRHPSILNPINIVVVKVLLLRDRDSGPKVTGNAALTLRNFCAWQKKLNKVSDKHPEYW
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                                                                                                           Similarity
                                                                                                                                                               PS50215; ADAM_MEPRO; 1, PS50092; TSP1; 1, PS500142; ZINC_PROTEASE;
                                                                                                                                      269
269 AA;
                                                                                                   Conservative
                                                                                                                                                                ZINC_PROTEASE; UNKNOWN_1
                                                                                                                                      269
29193 MW;
                                                                                                           21.0%;
98.1%;
                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation updat
                                                                                                           Score 548; DB 6; Pred. No. 1.2e-36;
                                                                                                                                      97A1CA80B33452FA CRC64;
                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----GDPTSRCGVASGWNPAIL--RALDPYKP
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                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                   1:
                                                                                                                  Length 269;
                                                                                                   Indels
                              105
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Matches 126;
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             357
                                               297
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Nature 368:32-38(1994).
EMBL; 269361; CAA93288.1; J
EMBL; 269360; CAA93287.1; J
EMBL; 269360; CAA93287.1; -
EMBL; 269361; CAA93287.1; J
EMBL; 269361; CAA93287.1; J
HSSP; P15167; IDTH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wilson R., Ainscough R., Anderson K., Baynes C., Berks M.,
Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,
Gardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston L.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Lightning J., Lloyd C., Mcmurray A., Mortinore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen I
Smaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,
Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K., Waterston R.,
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  019791 PRELIMINARY;
019791; 027524;
01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1998 (TrEMBLrel. 08,
01-DEC-2001 (TREMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF01421; Reprolysin; 1. Pfam; PF00090; tsp_1; 14. SMART; SM00209; TSP1; 18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS50215; ADAM_MEPRO; 1.
PROSITE; PS50092; TSP1; 6.
PROSITE: PS00142; ZINC_PROTEASE;
SEQUENCE 2165 AA; 244397 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.;
"2.2 Mb of contiguous nucleotide sequence from chromosome III of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (FEB-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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Rhabditidae; Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEROPS; M12.135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=94150718; PubMed=7906398;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nterPro; IPR000884; TSP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLC---GGLDGFFAVKHARYTLKPLLRGPWA 174
                                                                                                   GRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCK 343
                                                 WOHOHNOLGDDHEEHYDAAILFTREDLC-GHHSCDTLGMADVGTICSPERSCAVIEDDGL 402
WQQYYNDPDDSSVQHHDVAILLTRKD1CRSQGKCDTLGLAELGTMCDMQKSCAI1EDNGL
                                                                                                                                                                                                                                                              ASQLLDQSALSPAGGSGPQTW---W-----RRRRRSISRARQVELLLVADASMARLY 283
                                                                                                                                                                                                                                                                                                                                                                                                                          GGMS---RTDPDCIYRAHVKGVHQH-SIVNLCDSEDGLYGMLALPSGIHTVEPIISGNGT
                                                                                                                                                                                                                                                                                                                                                                     EEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAAL 234
                                                                                                                                                                                                             -STSVNETETTVA-----TWQDQWEDVIERKARSRRAANSWDHYVEVLVVADTKMYEYH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                      DGASRHRQHLVRK---FDPM------HFKSFDHLN-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18.9%;
32.1%;
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Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 493; DB 5;
Pred. No. 6.7e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UNKNOWN_1.
FCC3DA8AAA9C4888 CRC64;
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Best Local
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01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning, expression analysis, and structural characterization seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and thrombospondin-1 domains."; Gene 283:49-62(2002).
EMBL; AJ315735; CAC86016.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE-21856482; PubMed-11867212;
MEDLINE-21856482; PubMed-11867212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8TE56
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                                                                                                                                                                                                                                                                                                                                                                                                                                    230
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WSKCTSATITEFLDDGHGNCLLDL-PRKQ
                                                                             Q-----HNQL--GDDHEEHYDAAILFTREDLCGH--HSCDTLGMADVGTICSPERS
                                                                                                                                                                                                                                                                                                                                                                                                                      GRAALASQLLDQSALSPAGGSGPQTWWRRRRRSI--SRARQVELLLVADASMARLYG-RG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QGPFSGRE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RGPWAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLC---GGLDGFFAVKHARYTLKPL--L 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVY--AGGRRFLLDLERDGSVGIAGF-V 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LLLLVWGLDPGTAVGDAAADVEVVLPWRVRPDDVHLPPLPAAPGPRRRRR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLLCAFRL-PLAAVGPAATPAQ------DKAGQPPTAAAAAQPRRRQGEEVQERAEP 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THPWSWSPCSAGMLERFLENNRGQTQCLFDQP
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                                                    CVLAEDNGLNLAFTIAHELGHNLGMNHDD-----DHSSCAGRSHIMSGEWVKGRNPSDLS
                                                                                                                                                           EEYGGARYLGNNQVPGGKDDPPLVDAAVFVTRTDFCVHKDEPCDTVGIAYLGGVCSAKRK
                                                                                                                                                                                                                                                                     AQRFILTVMNMVYNMFQHQSLGIKINIQVTKLVLLRQRPAKLSIGHHGERSLESFCHWQN
                                                                                                                                                                                                                                                                                                                          LQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQH
                                                                                                                                                                                                                                                                                                                                                                            ---QLCKVLTEKK--KPTWGR-PSRDWRERRNAIRLTSEHTVETLVVADADMVQYHGAEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EEAGAARRRGRPAELCFYSGRVLGHPGSLVSLSACGAAGGLVGLIQLGQEQVLIQPLNNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRTP-PAAPRARP----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1095 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----ALIRRKW----SLTPSPSAE--AQRPE-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121099 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17.8%; Score 464; 30.1%; Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----GERALLLHLPAFGRDLYLQLRRDLRFLSRGFEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 6e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A5C6540484754D5D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Garabaya C.,
     479
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4; Length 1095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Quesada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seven novel human ADAMTSS, a family of metal disintegrin and thrombospondin-1 domains."; Gene 283:49-62(2002).
EMBL: AJ315734: CAC86015.1: -.
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01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Metalloprotease disintegrin 16 with thrombospondin type I motif.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q8TE57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lopez-Otin C.; "Cloning, expression analysis, and structural characterization "Cloning, expression analysis, and structural characterization "the course with course with the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8TE57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cal S., Obaya A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADAMTS16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Integrin; Protease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE=21856482; PubMed=11867212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hes 155;
451
                                                                                                                                                                                                                          334
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                                                                                                              391
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                                                                                                                                        LCG--HHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHD-DSKFC
                                                                                                                                                                                                                                                                                                                                                                                       WRRRRRSISRARQ-----VELLLVADASMARLYG-RGLQHYLLTLASIANRLYSHASIEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YFLRPL---PSHLSW---KLGRA-AQGSSPSHVLYKR---STEPHAPGASEVLVTSRTWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WASLLLCAFRLPLAAVGP-AATPAQDKAGQPPTAAAAAQPRRRQG------EEV
KKSEGN
                                                                                                                                                                                                                       NINIAIVGLILLEDEQPGLVISHHADHTLSSFCQW--QSGLMGKDGTRH-DHAILLTGLD
                                                                                                                                                                                                                                                                            HIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTRED
                                                                                                                                                                                                                                                                                                                                   --RHKRSLLRSHRNEELNVETLVVVDKKMMQNHGHENITTYVLTILNMVSALFKDGTIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAHQPLHSSDL-RLGLPQKQHFCGRRKKYMPQPPKEDLFILPDEYKSCL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YTLKPLLRGP----WAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PGFIVQTLGKTGTKSVQTLPP---EDFCFYQGSLRSHRNSSVALSTCQGLSGMIRTEEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGFVPAGGG-----TSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHAR 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DHRGDYVSHEIMHHQRRRRAVAVSEVESL------HLRLKGPRHDFHMDLRTSSSLVA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WMLLAQVAEQAPACAMGPAAAAPGSPSVPRPP-----PPAERPGWMEKGEYDLVSAYEV
                                                 EETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPR
                                                                                                           ICSWKNEPCDTLGFAPISGMCSKYRSCTINEDTGLGLAFTIAHESGHNFGMIHDGEGNMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QERAEPPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRR-FLLDLERDGSVGI 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1072 AA; 119491 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;

    IMSPTLAGRNGVFSWSPCSRQYLHKFLSTAQAICLADQPK

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Chordata;
; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Llamazares M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17.7%; Score 461.5; DB 4; 29.2%; Pred. No. 9.3e-29; Live 66; Mismatches 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata;
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            081EEFF78F47D061 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Garabaya C., Quesada
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1072;
  496
                                                    477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                107;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177
                                                                                                                                                                426
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RESULT 6
Q9W493
ID Q9W4

Q9W493

PRELIMINARY;

PRT;

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RA Adams D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Ballew R.M., Basu A., Baxendale J., Bayrakrarglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Bayrakrarglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Glory J.M., Cayley S., Dahlke C., Davenport L.B., Davies P.,
RA Glory J.M., Cayley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cayley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cayley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cayley S., Dahlke C., Days A.D., Dew I., Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Pletschhann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Glanr P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Glodek A., Gong F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
RA Liu X., Mattel B., McIntosh T.C., McLeod M.P., McPharson D.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
Laiko P., Lei Y., Levitsky A.A., Li J., Li Z., Ling Y., Lin X.,
RA Melson D.R., Nelson K., Saunders R.D.C., Scheeler F., Shen H.,
RA Mennett K., Kemington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Mennett K., Kemington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Sylrakas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Sylrakas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Kelmon D.A., Welson K., Shan M., Zhang G., Zhao Q., Zheng L.,
RA Sylrakas R., Tector C., Turner R., Scheeler F., Shao Q., Zheng L.,
RA Sylrakas R., Tector C., Turner R., Shao Q., Zhao Q., Zheng L.,
RA Shen S., Shan M., Shan M.
Matches
                            Query Match
Best Local
                                                                                                                                                          InterPro; IPR002870; Pep_M12B_pro; InterPro; IPR001990; Reprolysin. InterPro; IPR0019084; TsP1. InterPro; IPR000130; Zn_MTpeptdse Pfan; PF01562; Pep_M12B_propep; 1 Pfan; PF01421; Reprolysin; 1. Pfan; PF00990; tsp_1; 2. SMART; SM00209; TSP1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9W493;
01-MAY-2000 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                  EMBL; AE003435; AAF46065.1; -. HSSP; P15167; 1ATL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CG4096 protein.
                                                                                                                                                                                                                                                                                                             FlyBase; FBgn0029791;
                                                                                                                                                                                                                                                                                                                                MEROPS; M12.231
           Local Sin
hes 124;
                              Similarity
                                                                                    PS50215; ADAM_MEPRO; 1.
PS50092; TSP1; 1.
PS00142; ZINC_PROTEASE;
1054 AA; 118616 MW;
           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed-10731132;
                                                                                                                                                                                                                                                                        Pep_M12B_propep.
Reprolysin.
                            16.9%;
29.1%;
                                                                                                                                                                                                                    Zn_MTpeptdse.
12B_propep; 1.
                                                                                    C_PROTEASE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13,
19,
             62;
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Last sequence update)
Last annotation update)
       Pred. No. 2.9
                                                Score 443;
                                                                                    UNKNOWN_1.
DC15455555CB6212 CRC64;
         2 443; DB 5; I
NO. 2.9e-27;
Ismatches 142;
                                              Length 1054;
             Indels
               98;
             Gaps
             14;
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RESULT
ORDES
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
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ADAMTS-19.
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seven novel human ADAMTSs, a family of metalloproteinases with
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129; Conser
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InterPro; IPR001890; Reprolysin.
InterPro; IPR001890; Reprolysin.
InterPro; IPR000884; TSP1
Pfam; PF01562; Pep_M12B_propep; 1.
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Pfam; PF01421; Reprolysin; 1.
Pfam; PF00090; tsp_1; 4.
SMART; SM00209; TSP1; 4.
SMART; SM00209; TSP1; 1.
PROSITE; PS500215; ADAM_MEPRO; 1.
PROSITE; PS50092; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
Signal; Integrin; Protease; Metalloprotease.
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SIGNAL 122 2.
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01-MAR-2002
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01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
A disintegrin-like and metalloprotease with thrombospondin motif 14 precursor.
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Biochim. Blophys. Acta 1522:221-225(2001).
EMBL: AF358666; AAL40229.1;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                                                                                                      GPAAASAGSMVVDTPPTL----PRHSSHLRV---ARSPLHP--------
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-GGTLWPGRVGRHSLYFNVTVFGKELHLRLRPNRRL----VVP--
                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                    1223 AA;
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27.6%;
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                                                                                                                                                                                                          Score 418; DB 4;
Pred. No. 3.9e-25;
7; Mismatches 17(
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Best Local :
                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Cloning, expression analysis, and structural characterization seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and thrombospondin-1 domains."; Gene 283:49-62(2002).

EMBL; AJ34598; CAC87943.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   дикагуота; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-FETAL LUNG;
MEDLINE=21856482; PubMed=11867212;
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                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
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                                                                                                                                                LYSGG----GKVG-----YLVYAGGRRELLDLERDGSVGIAGFVPAGGGTSAPWRH----
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                                             -----RSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGR
                                                                                                  -GGTLWPGRVGRHSLYFNVTVFGKELHLRLRPNRRL----VVP--
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                                                                                                                                                                                                                                                                                                     .Conservative
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                                                                                                                                                                                                                                                                                                                             Score 418; DB 4;
Pred. No. 3.9e-25;
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Q8TEY8;
Q1-JUN-2002
Q1-JUN-2002
Q1-JUN-2002
                                                                                                                                                                                                                                                                                                                             MEDILINE-21839041; PubMed-11741898; Colige A., Vandenberghe I., Thiry M., Lambert C.A., Colige A., Vandenberghe I., Thiry M., Nusgens B.V.; "Cloning and Characterization of ADAMTS-14, a Novel High Homology with ADAMTS-2 and ADAMTS-3."; J. Biol. Chem. 277:5756-5766(2002).

EMBL; AF366351; AAL198141; -.

EMBL; AF366351; AAL198141; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
Eukaryota: Metazoa: Chordata;
Mammalia: Eutheria: Primates;
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DSVVREHGKEHVQNYVLTLMNIVDEIYHDESLGVHINIALVRLIMVGYRQSLSLIERGNP
                         ASMARLYGR-GLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDK-SLEVSKNA
                                                                   AHEHAPAHSN-PSGRAALASQLLDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVAD 276
                                                                                                                                                                                          VGIAGFVPAGGGTSAPWRH-----RSHCFYRGTVDGSPRSLAVFDLCGGLDGFFA 157
                                                                                                                                                                                                                                             PPGHPHPLAQRRRSKGLVQNIDQLYSGG----GKVG----YLVYAGGRRFLLDLERDGS 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HIDHVVFLTRQDF-----GPSGYAPVTGMCHPLRSCALNHEDGFSSAFVIAHETGHVLG
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                                                     LHNEAFGLGDLPNLLGLVGDQLGDTE-----RKRRHAKPGSYSIEVLLVVD
                                                                                                          TDSTDFFIEPLERGQQEKEASGRTH-----VVYRREAVQQEWAEPDG
                                                                                                                                      VKHARYTLKPLLRGPWAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPE 217
                                                                                                                                                                 L----VVP---GSSVEWQEDFRELFRQPLRQECVYTGGVTGMPGAAVAISNCDGLAGLIR 112
                                                                                                                                                                                                                     PPTLP----RHSSHLRVARSPLHPGGTLWPGRVGRHSLYFNVTVFGKELHLRLRPNRR
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2 (TrEMBLrel.
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28.1%;
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                                                                                                                                                                                                                                                                           68;
                                                                                                                                                                                                                                                                                      Score 410.5;
Pred. No. 1.
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Mismatches 173; Indels
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Musc
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
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01-JUN-2002
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LFTREDLCGH----HSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSH
                                                      HASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAI 363
                                                                                                                                                                                                               HLGCFYSGYVEDDPHSMVSVSLCGGMTGYIKTSFGALLIQPVNRTS-SDEVLHRVFRKSQ 404
                                                                                                                                                                                                                                          S-HCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGS
                                                                                                                                                                                                                                                                                                                                   DGLDDLDEEEHSAFYMPTKYYNYSLSEADLIYESKRNSDINSFLKESASAFAMTGTYRNM 285
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                             DASIGNSIRILLYRLISLPNINDQTHSSNE---MLKHFCQF---INQSGYER----DTAM
                                                                                          EQKSKSRKLNRKKRHYADVDNQVYTLEVLIAVDNSMKQFHGEDLQPYILILMSIVSSIFA
                                                                                                                      AGGSGPQTWWRRRRRSISRARQV---ELLLVADASMARLYGRGLQHYLLTLASIANRLYS
                                                                                                                                                     RNARHAVSK----FEL--------
                                                                                                                                                                                  ARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQLLDQSALSP
                                                                                                                                                                                                                                                                         SNEIWDPHPQYNLNVFGRQLHLVLRQDASFVHNHSMTHIRILKEGEEHPGPETEAEAEQR
                                                                                                                                                                                                                                                                                                    ------YLVYAGGRRELLDLERDGS------VGIAGFVPAGGGTSAPWRHR 127
                                                                                                                                                                                                                                                                                                                                                                PG-----HPHP------LAQRRRSKGLVQNIDQLYSGGGKVG----
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1688 AA; 18986
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(TrEMBLrel.
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25.8%; Pred. No. 3.50
Live 76; Mismatches
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01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
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EMBL; AJ311903; CAC83612.1; -.

SEQUENCE 1081 AA; 119655 MW; 0438BF645676461E CRC64;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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                      449 GNPCRKAEGN----IMSPTLTGNNGVFSWSSCSRQYLKKFLSTPQAGCLVDEPKQ---A
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                                                                                                                       TREDLCG--HHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHD-D 422
                                                                                                                                                                                                                                                                                          SGPQTWWRRRRSISRARQ---VELLLVADASMARLYGRG-LQHYLLTLASIANRLYSHA
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                                                         SKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQILG
                                                                                                   TGFDICSWKNEPCDTLGFAPTSGMCSKYRSCTINEDTGLGLAFTIAHESGHNFGMIHDGE
                                                                                                                                                                             TIGSDINVVVVSLILLEQEPGGLLINHHADQSLNSFCQWQSA--LIGKNGKRH-DHAILL
                                                                                                                                                                                                                  SIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHQQLGDDHEEHYDAAILF 365
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149; Conser
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AA; 119655 MW;
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27.2%;
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Last annotation update)
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8; Mismatches
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Pred. No.
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Q9VF61
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RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Pleischmann W.,
RA Dodson K., Doup L.E., Cownes M., Dugan-Rocha S., Pleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gelbart W.M., Glasser K.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibeyamn C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Liu X., Mattel B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Mount S M., Moy M. Mulrohv B. Murrhy L., Morris J., Moshrefi A.,
RA Mount S M., Moy M. Mulrohv B. Murrhy L., Morris J., Moshrefi A.,
RA Mount S M., Moy M. Mulrohv B. Murrhy L., Morris J., Moshrefi A.,
                                                                                                                                                                                                                             RA Moint S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA She B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao O.A.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao O.A.,
RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
RA Zheng X.H., Zhong F.N., Rubin G.M., Venter J.C.;
"The genome sequence of Drosophila melanogaster.";
Science 287:2185-2195(2000).
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Drosophila melanogaster (Fruit fly).
Nosophila melanogaster (Fruit fly).
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Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                     Pfam; PF00090; tsp_1; SMART; SM00209; TSP1;
                                                                            Pfam; PF01562; Pep_M12B_propep; Pfam; PF01421; Reprolysin; 1.
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                    PS50215;
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TSP1;
                  ADAM_MEPRO; 2
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Query Match
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Best Local Similarity
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Q95N23;
01-DEC-2001 (TrEMBLrel. 19, C
01-DEC-2001 (TrEMBLrel. 19, L
01-JUN-2002 (TrEMBLrel. 21, L
                                                                                    "Expression and activity of equine Submitted (APR-2001) to the EMBL/G EMBL, AF368322; AAK53426.1; -. InterPro; IPR001590; Reprolysin. InterPro; IPR000884; TSP1. Pfam; PF00090; tsp_1; 1. PROSITE; PS50215; ADAM_MEPRO; 1.
                                     NON_TER
                                                                            PROSITE;
                                                                                                                                                                                                                           Aggrecanase-2 (Fragment).

Equus caballus (Horse).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Perissodactyla; Equidae; Equus.

MCBI_TaxID=9796;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LFTREDLCGH---HSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSH 420
                                                                                                                                                                                                                                                                                                                                                                                                                             DDDDKCMPYVTRQNNNKVLHIMSSVMGIHMHPWSWSKKTDKSCLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DDSKFCEETFGSTEDKR---LMSSILTSIDASKPWSKCTSATITE 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DASIGNSIRILLVRLISLPNINDQTHSSNE---MLKHFCQF---INQSGYER----DTAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWOHQHNQLGDDHEEHYDAAI 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGSGPOTWWRRRRSISRARQV---ELLLVADASMARLYGRGLQHYLLTLASIANRLYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HLGCFYSGYVEDDPHSMVSVSLCGGMTGYIKTSFGALLIQPVNRTS-SDEVLHRVFRKSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S-HCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----VGIAGFVPAGGGTSAPWRHR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PG-----HPHP------LAQRRRSKGLVQNIDQLYSGGGKVG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LLG----MLIMFHLGLRSAHKGQEELPQSTHPLANSPPATPATLHPRRLDNDTSTDHEPP 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLGWASLLLCAFRLPL--AAVGPAATP--AQDKAGQPPTAAAAAAQPRRRQGEEVQERAEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LITREPICGSVPGKICHMLGLAELGTVCS-SSSCSIVQDTGLPTAFTMAHELGHILNMNH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EQKSKSRKLNRKKRHYADVDNQVYTLEVLIAVDNSMKQFHGEDLQPYILILMSIVSSIFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RNARHAVSK----FEL-------------------------GLDDFMSKL--EQVQEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQLLDQSALSP 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNEIWDPHPQYNLNVFGRQLHLVLRQDASFVHNHSMTHIRILKEGEEHPGPETEAEAEQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DGLDDLDEEEHSAFVMPTKVYNYSLSEADLIYESKRNSDINSFLKESASAFAMTGTYRNN 184
                                                                             PS50092;
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187
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                                      8
                                                                             TSP1;
                                                  187
                                     20477 MW;
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           13.5%;
                                                                                                                                                           equine aggrecanase
EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                                                                                                                                                                                                                                                                                              Created)
           Score 354;
                                                                                                                                                                                                                                                                                                                                                         PRT;
                                     DB10785095372E8C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 206; Indels 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C1293180AB19B700 CRC64;
                                                                                                                                                                          aggrecanases
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          DB
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          6.
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                                                                                                                                                             databases
                                     CRC64;
        Length
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           187;
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RESULT 15
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Q8UVF1
Q1-MA
Q7 01-MA
Q7 10-MA
Q7 C1ch
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Best Local S
Matches 128
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OBUVF1
QBUVF1;
O1-MAR-2002 (TrEMBLrel. 2
O1-MAR-2002 (TrEMBLrel. 2
O1-JUN_2002 (TrEMBLrel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS50215; ADAM_MEPRO; 1.
PROSITE; PS50214; DISTINTEGRIN_2; 1.
PROSITE; PS01186; EGF_2; UNKNOWN_1.
PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
SEQUENCE 899 AA; 97896 MW; EC6CE81C37713B35 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00200; disintegrin; 1.
Pfam; PF01562; Pep_M12B_propep; 1.
Pfam; PF01421; Reprolysin; 1.
PRINTS; PR00289; DISINTEGRIN.
ProDom; PD000664; Disintegrin; 1.
SMART; SM00050; DISIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADAM 19.
Coturnix coturnix (common quail).
Coturnix coturnix (common quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001762; Disintegrin.
InterPro; IPR000561; EGF-1ke.
InterPro; IPR002870; Pep-M12B_propep.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000130; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lewis S.L., Farlie P.G., Nowgreen D.F.;
"Cloning of ADAM 12/19 in Quail.";
"Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases
EMBL; AF456467; AAL56618.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 475 LPRKQILG
||||||||
61 LPRKQILG
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   298
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nes 128; Conserv
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                                                                                                                                                                          QHRIYRLDDLRM-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GWASLLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEVQERAEPPGHPHP 63
AN---RLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDD
                                                         WLGDFA---AGVKFPN--HRVRREALQATKYVELLLVADYAEVQKHHFNIEAIRLKLVEA 228
                                                                                                             LLDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRGLQHYLLTLASI 297
                                                                                                                                                                                                           KGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQ 237
                                                                                                                                                                                                                                                                                                                                  GTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVK-HARYTLKPLLRGPWAEEE 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLGLSHDDSKFCEENFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLD 60
                                                                                                                                                                                                                                                                                          AQTIPLAHTEHCFYQGVVRGREHFSLTLSSCQGLRGLIILRSNCSYVLEPLPDSP----D 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFV-----PAGG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GWG--LLCATALCLLLQLPRSADAGGTEPQPAVLVPSWDTLR-----SPDGEQHP 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13.0%; Score 339; DB 13; 26.0%; Pred. No. 7.1e-19; tive 70; Mismatches 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98.5%;
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20,
                                                                                                                                                                          -----PAGSC-----GHQDS-----MATARN 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation updat
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0; Mismatches 1;
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                                                                                                                                                                                                                                                                                                                                                                                                              --IQAEGQELILDLEKNGDLFAPGYTETHYSQTGR 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           899
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104;
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Result
No.
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Maximum DB
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Maximum Match 100%
Listing first 45 summaries
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Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein – protein search, using sw model
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              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution,
           407
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hypothetical protein KIAA0688 - human C;SpecLes: Homo saplens (man) C;Date: 01-Feb-1999 *sequence_revision 01-Feb-1999 *text_change 21-Jul-20 C;Accession: T00355 R;Ishikawa, K.; Nagase, T.; Suyama, M.; Miyajima, N.; Tanaka, A.; Kotani, DNA Res. 5, 169-176, 1998 A;Title: Prediction of the coding sequences of unidentified human genes. A;Reference number: Z14142; MUID:98403880; PMID:9734811 A;Accession: T00355
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A;Cross-references: EMBL:AB014588; NID:g3327189; PIDN:BAA31663.1; PID:g3327190
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTS 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KGPEVTSNAALTLRNFCNWQKQHNSPSDRDPEHYDTAILFTRQDLCGSHTCDTLGMADVG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.2%;
33.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                type 1 repeat homology <THR3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 658.5; DE Pred. No. 2e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----TPNSAGGPGAHILRRKSPA----S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 837;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels 113;
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C;Date: 15-UCL ....
C;Accession: T18517
C;Accession: T18517
C;Accession: T18517
R;Colige, A.; Nusgens, B.V.; Lapiere, C.M.
submitted to the EMBL Data Library, February 1996
submitted to the EMBL Data Library, February 1996
A;Description: Cloning of the cDNA of the bovine procollagen
A;Description: Cloning of the cDNA of the bovine procollagen
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N;Alternate names: procollagen N-proteinase C;Species: Bos primigenius taurus (cattle) C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999

procollagen N-endopeptidase (EC 3.4.24.14) I -

bovine

#text_change

15-Oct-1999

I N-proteinase

T18517

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A; Residues: 1-2165 <WIL>
A; Cross-references: EMBL: Z69360; P.
A; Cross-references: clone F25H8
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A; Introns: 31/1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-2165 <WI2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary; translated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Gajadsty,
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A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data Library, A; Reference number: Z19413
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypothetical protein F25H8.3 - Caenorhabditis elega
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Cross-references: EMBL: Z69361;
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Best Local S
Matches 126
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   477
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THPWSWSPCSAGMLERFLENNRGQTQCLFDQP
                                                                                                              HAAFTVAHEIGHLLGLSHDDSKFCEE----TFGSTE-DK-----RLMSSILTSI 446
                                                                                                                                                    WQQYYNDPDDSSVQHHDVAILLTRKDICRSQGKCDTLGLAELGTMCDMQKSCAIIEDNGL
                                                                                                                                                                                          WQHQHNQLGDDHEEHYDAAILFTREDLC-GHHSCDTLGMADVGTICSPERSCAVIEDDGL 402
                                                                                                                                                                                                                                                                   GRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCK 343
                                                                                                                                                                                                                                                                                                                                                                                  EH-----HFKSFDHLN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGMS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLC---GGLDGFFAVKHARYTLKPLLRGPWA 174
                                     DASKPWSKCTSATITEFLDDGHG--NCLLDLP
                                                                           SAAFTIAHELGHVFSIPHDDERKCSTYMPVNKVCKFQSTKFDKTQFQNNFHIMAPTLEYN
                                                                                                                                                                                                                               GRSLEDYVLTLFSTVASIYRHQSLRASINVVVVKLIVLKTENAGPRITQNAQQTLQDFCR
                                                                                                                                                                                                                                                                                                                                            ASQLLDQSALSPAGGSGPQTW---W-----RRRRRSISRARQVELLLVADASMARLY 283
                                                                                                                                                                                                                                                                                                                                                                                                                        EEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAAL 234
                                                                                                                                                                                                                                                                                                         -STSVNETETTVA-----TWQDQWEDVIERKARSRRAANSWDHYVEVLVVADTKMYEYH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     al Similarity
126; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           -RTDPDC1YRAHVKGVHQH-SIVNLCDSEDGLYGMLALPSGIHTVEPIISGNGT 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18.9%; Score 493; DB 2;
ilarity 32.1%; Pred. No. 3.3e-29;
Conservative 66; Mismatches 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52/1;
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 508
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                                                                                                                                                                                                                                                                                                                                                                        243
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A;Accession: T18517
A;Status: preliminary; translated from A;Molecule type: mRNA
A;Residues: 1-1205 <COL>
A;Cross-references: EMBL:X96389; NID:e9
A;Experimental source: skin
C;Genetics:
                              A;Status: preliminary; nucleic acid sequence not shown A;Molecule type: mRNA A;Residues: 1-903 <YAG>
A;Residues: 1-903 <YAG>
A;Cross-references: EMBL:D50411; NID:g1054586; PIDN:BAA08912.1; C;Superfamily: mouse meltrin alpha; disintegrin homology E;421-503/Domain: disintegrin homology CIS>
E;421-503/Domain: disintegrin homology CIS>
                                                                                                                                        A;Title: A metalloprotease-disintegrin participating in A;Reference number: S60257; MUID:96026308; PMID:7566181 A;Accession: S60257
                                                                                                                                                                                                                      meltrin alpha - mouse
C;Species: Mus musculus (house mouse)
C;Date: 110-Apr-1996 #sequence_revision 19-Apr-1996 #text_change 20-Jun-2000
C;Accession: S60257
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                                                                                                                                                                                       R; Yagami-Hiromasa, T.; Sato, T.; Kurisaki, T.; Kamijo, K.; Nabeshima, Nature 377, 652-656, 1995
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                                                                                                                                                                                                      R; Yagami-Hiromasa,
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;Gene: PC I-NP
 Query Match
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                                                                                                                                                                                                                                                                                                                                                 FHRFHWSRCSQQELSRYL --- HSYDCLRDDP 464
                                                                                                                                                                                                                                                                                                                                                                          DASKPWSKCTSATITEFLDDGHG-NCLLDLP 476
                                                                                                                                                                                                                                                                                                                                                                                                          PVRSCTLNHEDGFSSAFVVAHETGHVLGMEHDGQGNRCGDEVRLGS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EIGNPSQSLENVCRWAYLQQKPDTDHDEYHDHAIFLTRQDF---GPSGMQGYAPVTGMCH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VGIAGFVPAGGGTSAPWRHRS-------HCFYRGTVDGSPRSLAV-FDLCGGLDGFF 156
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                                                                                                                                                                                                                                                                                                                                                                                                                                         PERSCAVIEDDGLHAAFTVAHEIGHLLGLSHD-DSKFC--EETFGSTEDKRLMSSILTSI 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLGVDDSVVQFHGTEHVQKYLLTLMNIVNEIYHDESLGAHINVVLVRIILLSYGKSMSLI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEAHEHAPAHSNPSGRAALASQLLDQSALSPAGGSGPQ----TWWRRRRSISRARQVEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VVSAATAPAGVRTRRAAPAQIPGL----SGGSEEDPGGRLFYNVTVFGRDLHLRLRPNAR 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RAEPPGHPHPLAQRRRSKGLVQNIDQLYSG-----GGKVGYLVYAGGRRFLLDLERDGS 107
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   11.1%;
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Pred. No. 6.2e-23;
 Score 290.5;
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 Length
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                                                                                                                                                                       myoblast fusion
                                                                                                                                                                                                                                                                                                                                                                                                             -IMAPLVQAA 436
   903;
                                                                             PID:g1054587
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
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                                                                                                           CGGLDGFFAV---
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A:Cross-references: EMBL:x13335
C:Superfamily: mouse meltrin alpha; disintegrin homology
C:Reywords: glycoprotein; surface antigen; transmembrane
E:1-14/Domain: signal sequence *status predicted <SIG>
E:402-84/Domain: disintegrin homology <DIS>
E:659-683/Domain: transmembrane *status predicted <TMM>
E:330/Active site: Glu *status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        monocyte surface antigen MS2 precursor - C:Species: Mus musculus (house mouse) C:Date: 03-Feb-1993 #sequence_revision 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R:YOShida, S.; Setoguchi, M.; Higuchi, Y.; Akizuki, S.; Int. Immunol. 2, 585-991, 1990 A;Title: Molecular cloning of cDNA encoding MS2 antigen, A;Reference number: A60385: MUID:91197896; PMID:1982220
                                                                                                                                                                                                                                                                                                                                                        34 PPTAAAAAQPRRRQGEEVQERAEPPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYA 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCE
                                               YTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQLLDQSALSPAGGSGP 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPR-KQILGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPASTPEAHEHAPAHSNPSGRAALASQ----LLDQSALSPAGGSGPQTWWRRRRSISRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RRFLLDLERDGSVGTAGFVPA-----GGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCG
                                                                                                    CAGLRGFFRVGSTVHLIEPLDADEEGQHAMYQAKHLQQKAGTCGVKDTNLNDLGPRALEI 181
                                                                                                                                                                                                    SGHVFTLHLRKNRDLLGSSYTETYSAANGSEVTEQLQEQDHCLYQGHVEGYEGSAASIST 121
                                                                                                                                                                                                                                                   GGRRFLLDLERD----GSVGIAGFVPAGGG-TSAPWRHRSHCFYRGTVDGSPRSLAVFDL 148
                                                                                                                                                                                                                                                                                                        PAVAPGPPLPHVKQYEVV------WPRRLAASRSRRALPSHWGQYPE---SLSYALGT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EKGGCIMNP-STGFPFPMVFSSCSRKDLEASLEKGMGMCLFNLPEVKQAFGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTIGMAPIMSMCTAEQSGGVVMDHSDSPLGAAVTLAHELGHNFGMNHDTLERGCSCRMAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -CSISQDPFTRLHEFLDWRKIKLLPRKSHDNAQL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RQVELLLVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDK
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24.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                          Score 275.5; DB 2;
Pred. No. 4.7e-13;
2; Mismatches 174;
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                                                                                                                                                    -KHARYTLKPLLRGPWAEEEKGRVYGDGSARILHV 192
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                                                                                                                                                                                                                                                                                                                                                                                                             Indels 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 826;
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RESULT 7
G02390
disintegrin-like metalloproteinase MDC15 (EC 3.4.24.-) - human
C;Species: Homo sapiens (man)
C;Date: 21-Dec-1996 #sequence_revision 06-Jun-1997 #text_change
C;Accession: G02390; PC4263
R;Herren, B; Raines, E.W.; Ross, R.
submitted to the EMBL Data Library, January 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-461 < MCK:
A; Residues: 1-461 < MCK:
A; Residues: 1-461 < MCK:
A; Experimental source: articular chondrocyte
C; Comment: This protein is a membrane bound protein and involved
C; Superfamily: mouse meltrin alpha; disintegrin homology
C; Keywords: hydrolase; metalloproteinase; zinc
F; 420-503/Domain: disintegrin homology < DIS>
F; 348, 352, 358/Binding site: zinc (His) #status predicted
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A; Accession: G02390
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Residues: 1-814 <HER>
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                                                                        207
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VVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAILFTREDLCGHHSCD: | :|:| | | |:| | | | |
                                                                 DVVTETKTVELVIVADHSEAQKY-RDFQHLLNRTLEVALLLDTFFRPL----NVRVALVG
                                                                                                 RSISRARQVELLLVADASMARLYGRGLQHYL---LTLASIANRLYSHASIENHIRLAVVK 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVDFIG----STVGLAKVSALCS-RHSGAVNQDHSKNSIGVASTMAHELGHNLGMSHDED
                                                                                                                                                                                                ALPPRASCETPASTPEAHEHAPAHSNP-SGRAALASQLLDQSALSPAGGSGPQTWWRRRR 260
                                                                                                                                                                                                                                             WVSICTCSGLRGLVVLTPERSYTLE---QGP-----GDLQG------
                                                                                                                                                                                                                                                                                      LAVFDLCGGLDGFFAVKHAR-YTLKPLLRGPWAEEEKGRVYGDGSARILHVYTREGFSFE 201
                                                                                                                                                                                                                                                                                                                                 RIKLELDGDSHILELLQNRELVPGRPTLVWYQPDGTRVVSEGHTLENCCYQGRVRGYAGS 129
                                                                                                                                                                                                                                                                                                                                                                            RFLLDLERD*****--GSVGIAGFVPAGGGTSAPWRHRSHCFYRGTVDGSPRS 142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----RVVLVGLEIWNKDK-FYISRYANVTLENFLSWREQNLQ----GQHPHDNVQLIT
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                                                                                                                                                         -HLPGHTCALSWRESVHTQTPPEHPLG-----
                                                                                                                                                                                                                                                                                                                                                                                                                       51;
                                                                                                                                                                                                                                                                                                                                                                                                                    Score 263; DB 2;
Pred. No. 4.2e-12;
1]; Mismatches 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 814;
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C;Species: Echis pyramidum leakeyi
C;Date: 19-Mar-1997 #sequence_revision
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A; Residues: 1-617 < PAI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Title: Cloning of metalloprotease genes in the carpet viper (Echis pyramidum A;Reference number: S48160; MUID:95010025; PMID:7925363 A;Accession: S48160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Paine, M.J.I.; Moura-Da-Silva, A.M.; Theakston, R.D.G.; Eur. J. Biochem. 224, 483-488, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: S48160
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                                                                                                                                                                                                                                                                                                                                                                                                                 93
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 HPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSV-----GIAGFVPA 116
                                                                                                                                                                                                                                                                            OLVATS--
                                GHGNCLLDLPRK
                                                                                                  EIGHLLGLSHDDSKF-CEETFGSTEDKRLMSSILTSIDASKP---WSKCTSATITEFLDD 466
                                                                                                                                                                   DHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPERSCAVIED --- DGLHAAFTVAH 410
DOSKCIDNKPLK
                                                                                                                                  KH----DNAQLFTGINLNG----QTLGIARMRGMCSPSNSVGVIQDYCKNYLLVAITMAH
                                                                                                                                                                                                     IVNILNMVY----IVFNIHVALTHIEIWSTRDQ-ITVQSAADVTLDLFGDWRAKNLLTRK 284
                                                                                                                                                                                                                                                                                                           QLLDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGR---GLQHYLLT 293
                                                                                                                                                                                                                                                                                                                                                                             EKGRVYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALAS 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAPAKTCIMEASTDFLPGLNFSNCSRRALEKALLDGMGSCLFERLP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TVGMAIQNSICSPDFSGGVNMDHSTSILGVASSIAHELGHSLGLDHDLPGNSCPCP---G
                                                                  ELGHNLGMDHDNGNCNCPDT - -
                                                                                                                                                                                                                                                                                                                                                                                                               GREITTNPPVEDHCYYHGRIQNDADSTASMSACNGLKGYFMLRGETYLIEP-LKIPDSEA 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEE 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YPOKNATLTKEAIOOPEOKYE -- DTMRYEFKVNGEPVVLHLEKNKGLFSEDYSETHYSPD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TLGMADVGTICSPERSCAVIEDDG ---LHAAFTVAHEIGHLLGLSHD----DSKFCEETFG
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398
                                  478
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                                                                                                                                                                                                                                                                         -EQQRSYK--KYIEFVVVADYIMYRKYNNDSTAVRRRIYE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 262.5; DI
Pred. No. 3.2e-:
B; Mismatches :
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                                                                  -SCIMSAVAGPEPVFSFSNCSRNDYRSFRNS
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A;Rosidues: 191-192,'R',194-199,'Q',201-240,'Q',242,'T',244-357,'AAM',361-381,'T',383-39
A;Rosidues: 379-Glu and 382-Leu were also found
A;Note: 379-Glu and 382-Leu were also found
A;Note: a variant lacking 192-Gln was also found
R;Guan, A.L.; Retzios, A.D.; Henderson, G.N.; Markland Jr., F.S.
Arch. Biochem. Biophys. 289, 197-207, 1991
A;Title: Purification and characterization of a fibrinolytic enzyme from venom of the sc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arch. Biochem. Biophys. 320, 141-148, 1995
A; Title: Molecular cloning and sequence analysis
A; Reference number: S66259; MUID:95314311; PMID:7
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A; Accession: S25461
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A; Residues: 1-411 <SEL>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Selistre de Araujo, H.S.; Ownby,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                                                                                                       344
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                                                                                                                                                                                       DGNQ-CHCGANSC---
                                                                                                                                                                                                                                                      DDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRG---LQHYLLTLASIANRLYSHA 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A--VYKYENVEKEDEAPKMCGVT--QNWESYE-----PIKKAF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSAR 188
                                                                                                                                                                                                                                                                                                                                                                                          LFTREDLCGHHSCDTLGMADVGTICSPERSCAVIEDD----GLHAAFTVAHEIGHLLGLSH 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----NIRFALVGLEIWSNQD-LITVTSVSHDTLASFGNWRE-----TDLLRRQRHDNAQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHQLGDD--HEEHYDAAI 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HCYYHGRIENDADSTASISACNGLKGHFKLQGEMYLIEPL------ELSDSEAH 149
   metalloproteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                     DTVGLAYVGGMCQLKHSTGVIQDHSAINLLVALTMAHELGHNLGMNH
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                                                                                                                                                                                    -VMPSVL-SDQPSKLFSDCSKKDYQTFLPVNNPQCILNKP
   e
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 252; DB 1;
Pred. No. 1.2e-11;
   3.4.24.-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 135;
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PMID:7793974
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   precursor -
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   Vipera lebetina
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Markland Jr.,
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                             vascular apoptosis-inducing protein 1 - western diamondback rattlesnake C;Species: Crotalus atrox (western diamondback rattlesnake) C;Date: 30-Jun-2001 **sequence_revision 30-Jun-2001 **text_change 01-Mar-C;Accession: JC7530; PC7105
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A; Experimental source: venom
C; Superfamily: trigramin precursor; disintegrin homology
C; Superfamily: trigramin glycoprotein; hydrolase; metallog
C; Keywords: anticoagulant; glycoprotein; hydrolase; metallog
F; 1-18/Domain: signal sequence #status predicted <SIG>
F; 19-19/Pomain: activation peptide #status predicted <ACP>
F; 192-397/Product: fibrinolytic metalloproteinase #status predicted <ACP>
F; 404-474/Domain: disintegrin homology <DIS>
F; 416-475/Domain: disintegrin #status predicted <DNT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Date: 10-Sep-1996 #sequence_revision 18-Oct-1996 #text_C;Accession: JC4880; PC4181
R;Siigur, E.; Aaspollu, A.; Tu, A.T.; Siigur, J.
Biochem. Biophys. Res. Commun. 224, 229-236, 1996
A;Title: cDNA cloning and deduced amino acid sequence of A;Reference number: JC4880; MUID:96280739; PMID:8694817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;456-458/Region: cell attachment (R-G-D) motif
E;170,337,341,347/Binding site: zinc, catalytic (Cys, His, His, F;312-392,352-376,354-359/Disulfide bonds: #status predicted
F;317,341,347/Binding site: zinc, catalytic (His) (active) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: protein
A; Residues: 214-246 <SII2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: PC418:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Cross - references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A; Accession: JC4880
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C;Species: Vipera lebetina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;338/Active site: Glu #status predicted
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Best Local S
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389
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                                                HGNCLLDLP 476
                                                                                                                                                        VAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDG
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NPQCILNQP
                                                                                                     MAHELGHNLGMNHDGDQ-C----NCGANGCVMSVVLIE-QRSYQFSDCSKNKYQTYLTNR
                                                                                                                                                                                                              DH-----AQLLTGIDL----DDNIIGLAYDDSMCDPRYSVGIVQD---HSAIIRLVAVT
                                                                                                                                                                                                                                                                                                                            LVNNINGFYRDLNVHITLSAVEVWTNGD----LINVQPAASVTLNLFGEWRERDLLNRRMH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEE 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NPQAVTGLPKGAVKQPEKKYE--DTMQYEFEVNGEPVVLHLEKNRGLFSKDYSETHYSPD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----VYKYENIEKEDEAPKMCGVTQTNW------ASDEPIKKASQLN
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Pred. No. 3.6e-11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     -RYIELVIVADHAMVTKYNGDLAAITTWVHQ
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#Sta

Kaji, K.;

Fox,

J.W.; Hayashi,

01-Mar-2002

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A;Cross-references: DDBJ:AB042840
A;Accession: PC7105
A;Molecule type: protein
A;Residues: 240-251;274-283;378-385
C;Comment: This protein, as a homod
a specific substrate, induces apopt
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene: vapl
C; Superfamily
C; Keywords: a
A:Accession: PC4108
A:Molecule type: protein
A:Residues: 237-251 <HU2>
A:Experimental source: venom gland
C:Comment: The proteolytic activity
C:Superfamily: trigramin precursor;
                                                                                                                                                                                                                                                                      fibrinolytic proteinase (EC 3.4.24.-) precursor - Chinese habu N;Alternate names: fibrinogenolytic proteinase C;Species: Trimeresurus mucrosquanatus (Chinese habu) C;Date: 21-Dec-1995 #sequence_revision 08-Feb-1996 #text_change 07-May-1999 C;Accession: JC4342; PC4108 R:Huang, K.F.; Hung, C.C.; Pan, F.M.; Chow, L.P.; Tsugita, A.; Chiou, S.H. Biochem. Biophys. Res. Commun. 216, 223-233, 1995
                                                                                                                                              A; Reference number: JC4342;
A; Accession: JC4342
A; Molecule type: mRNA
A; Residues: 1-481 <HUA>
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JC4342
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A:Title: CDNA cloning and characterization of vascular apoptosis-inducing protein A:Reference number: JC7530; MUID:20525424; PMID:11071872
A:Contents: Crude venom gland
A:Accession: JC7530
A:Molecule type: mRNA
A:Residues: 1-610 <mas>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
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                                                                                                                            A; Cross-references: EMBL: X91190
                                                                                                                                                                                                                                                   A; Title: Characterization of multiple metalloproteinases
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                                                                                                                                                                                                                                    analysis
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Keywords: apoptosis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDHD---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPR 477
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAILFTREDLCGHHSCDTLGMADVGTICSPERSCAVIEDDG-LH--AAFTVAHEIGHLLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDD--HEEHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----EQQRYLNAKKYVKLFLVADYIMYLKYGR-----NLTAVRTRMYDIVNVI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---VFKYENVEKEDEAPKMCGVT--QNWESYE-----PIKKAS-----QSNLTP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRAALASQLLDQSALSPAG
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240-251;274-283;378-385;507-519 <MA2>
240-251;274-283;378-385;507-519 <MA2>
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26.0%;
                                                                                                                                                                                                              MUID:96067555; PMID:7488093
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Pred. No. 1
  is inhibited disintegrin |
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1.2e-10;
  by EDTA or phenanthroline homology
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C:Keywords: anticoagulant; hydrolase; metalloproteinase; v ;:-18/Domain: signal sequence #status predicted <5/G>
F:J-18/Domain: propeptide #status predicted <PRO>
F:J88-392/Product: fibrinolytic proteinase #status predict p:J99-47/Domain: disintegrin homology <DIS-
F:J99-47/Domain: disintegrin homology <DIS-
F:J41-47B/Product: disintegrin homology <DIS-
F:J41-47B/Product: disintegrin hydrology <DIS-
F:J43-337,343/Binding site: zinc. catalytic (His) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           trigramin precursor - Indian green tree viper (EC 3.4.24.-); platelet aggregation inhibitor C; Species: Trimeresurus gramineus (Indian green tree viper) C;Date: 16-Sep-1992 #sequence_revision 16-Sep-1992 #text_change 18-Jun-1999 C;Accession: S12589; A30065; A29784
A;Molecule type: protein
A;Residues: 408-479 <HUA>
R:Huang, T.F.; Holt, J.C.; Lukaslewicz, H.;
J. Biol. Chem. 262, 16157-16163, 1987
J. Title: Trigramin. A low molecular weight p
A;Reference number: A29784; MUID:88058981; P
A;Accession: A29784
                                                                                                                                                                                                                                            A;Title: Trigramin: primary structure and its inhibition A;Reference number: A30065; MUID:89229063; PMID:2653425 A;Accession: A30065
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jacobson, M.A.
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25.0%;
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Pred. No. 1.4e-10;
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PMID:3680247
                                                                                                                                        Niewiarowski,
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A; Molecule type: protein A; Residues: 408-419 < HU2

<HU2>

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A.Molecule type: protein
A.Residues: 188-206 (SER)
C.Superfamily: atrolysin C
C.Keywords: hydrolase; metalloproteinase; zinc
F.1-18/Domain: signal sequence #status predicted <SIG>
F.1-18/Domain: propeptide #status predicted <PRO>
F.188-407/Product: metalloproteinase #status experimental <MA
F.304-384,344-351,346-368/Disulfide bonds: #status predicted
F.329,333,339/Binding site: zinc, catalytic (His) #status pre
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S66260
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                                                                                                                                                                                                                                                                                                                                                  R;Selistre de Araujo, H.S.; Ownby, C.L. Arch. Biochem. Blophys. 320, 141-148, 1995
A;Title: Molecular cloning and sequence analysis of cDNAs A;Reference number: S66259; MUID:95314311; PMID:7793974
                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Agkistrodon contortrix contortrix (southern copperhead)
C;Date: 17-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 22-Jun-1999
C;Accession: S66260; S74263
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A; Residues: 1-407 <SEL>
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F;330/Active site: Glu #status predicted
                                                                                                                                                                                                                                  A; Accession: S74263
                                                                                                                                                                                                                                                             A; Cross-references: EMBL: U18234;
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                                                                                                                                                                                                                                                                                                                            A; Accession: S66260
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                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                        A; Reference number: A; Accession: T24653
                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, A; Reference number: Z19917
                                                                                                                                                                                                                                                                                                                                                                                                     R; McMurray, A.
                                                                                                                                                                                                                                                                                                                                                                                                                     A; Experimental source: clone C02B4
                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: EMBL: Z50004; PIDN: CAA90293.1; GSPDB: GN00028;
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A; Residues: 1-1444 <
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A; Reference number: Z19031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R; McMurray, A.
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83
                                                                          Local Similarity 25.7 es 113; Conservative
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TYAGLRDYEQCHYQGEVKSHGNMKAAISDCGALMGSIVMEDHFLVLQTLPKRVHHLQKER 142
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                                                                                                                                                       25/3; 70/3; 96/3; 139/3; 187/1; 234/2; 282/3; 376/2;
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                                                                          Score 237.5; DB 2
Pred. No. 7.8e-10;
9; Mismatches 154
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Search completed: April 21, 2003, 14:48:30 Job time: 33.3419 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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Match Length DB
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ALIGNMENTS

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; ORGANISM: mus musculus ADAMTS-5 US-09-918-171A-2
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NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 930
TYPE: PRT
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APPLICANT: Apte, Suncel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding
FILE REFERENCE: 26473/04193
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Best Local Similarity 83.8%;
Matches 409; Conservative 14
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EYE--RIYGDGSSRILHVYNREGFSFEALPPRASCETPASPSGPQESPSVHSRSRRRSAL
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Pred. No. 5.4e-164;
4; Mismatches 53;
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; ORGANISM: Homo sapiens
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SOFTWARE: FASTSEQ for Wi
SEQ ID NO 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Holtzman, Douglas A.
APPLICANT: Goodearl, Andrew D.J.
APPLICANT: Goodearl, Andrew D.J.
TITLE OF INVENTION: TANGO-71, TANGO-74, TANGO-76, AND TANGO-83
FILE REFERENCE: 09404/041001
CURRENT APPLICATION NUMBER: US/10/105,929
CURRENT FILING DATE: 2002-03-25
CURRENT FILING DATE: 2002-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/130,491
PRIOR FILING DATE: EARLIER FILING DATE: 1998-08-07
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US 60/058,108
PRIOR FILING DATE: EARLIER FILING DATE: 1997-09-05
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US 60/054,961
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US 60/054,961
PRIOR FILING DATE: EARLIER FILING DATE: 1997-08-06
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                                                                                                                     RAALASQLLDQSALSPAGGSGPQTWWR-----
                                                                                                                                                                                                                                                             SHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPLLRGPWAEEEKGRVYGDGSA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGH 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNECKWQHQHNQLGDD 354
                                                                          KA----ETEDEDEGTEGEDEGPQ--WSPQDPALQGVGQPTGTGSIRKKRFVSSHRYVETM
                                                                                                                                                                                                RILHVYTREGFSFEALPPRASCETPASTPEAH------EHAPAHSNPSG 230
                                                                                                                                                                                                                                                                                                                                                                                             PGSRSFGPVPTLLLLAAALLAVSDALGRPSEEDEELVVPELERAPGHG---TTRLRLHAF 81
                                                                                                                                                                                                                                                                                                                                                                                                                                 PAODKAGOPPT-----AAAAAOPRRROGEEVQERAEP----PGHPHPLAORRRSKGL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASQLLDOSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRGLQHYLLTL
                                                                                                                                                                                                                                       AHCFYSGTVNGDPSSAAALSLCEGVRGAFYLLGEAYFIQPL---PAASER----- 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APQLLDHSAFSPSGNAGPQTWWRRRRRSISRARQVELLLVADSSMARMYGRGLQHYLLTM
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                                                                                                                                                          -LATAAPGEKPPAPLQFHLLRRNRQGDVGGTCGVVDDEP---RPTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31.7%; Score 829.5; DB 12; 37.8%; Pred. No. 2.1e-60;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches 150;
                                                                                                                 RRRRSISRARQVELL 272
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APPLICANT: Kimble, Judith E
APPLICANT: Blelloch, Robert H
TITLE OF INVENTION: Agent and Method for Modulating Cel
FILE REFERENCE: 960205.95386
CURRENT APPLICATION NUMBER: US/09/321,987B
CURRENT FILING DATE: 1999-05-28
PRIOR APPLICATION NUMBER: 60/087,170
PRIOR FILING DATE: 1998-05-29
PRIOR FILING DATE: 1998-05-29
PRIOR APPLICATION NUMBER: 60/129,023
PRIOR FILING DATE: 1999-04-13
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US-09-321-987B-4
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Best Local Similarity 37.3
Matches 192; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US Patent No. US20020102210A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 950
TYPE: PRT
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                   TICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MLL----EDEELVLPSLERA- 54
                                                                    TVCDPSRSCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKHCASLNGVTGDSHLMASMLSS
                                                                                                                                                  PRYVETMLVADQSMADFHGSGLKHYLLTLFSVAARFYKHPSIRNSISLVVVKILVIYEEQ 300
                                                                                                                                                                     ARQVELLLVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLLGDKD
                                                                                                                                                                                                                          RGSGGAKCGVMDDETL-PTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSS 240
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                                                                                                                                                                                                                                                                                                                                                                                              -VPAGGGTSA----PWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPL 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGF--- 113
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                                                                                                                                                                                                                                                               SGRAALASQLLDQSALSPAGGSGPQT-----WWR----
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                                                                                                                                                                                                                                                                                                    -----APGVATERLAPAVPEEESSARPQFH---ILRRRR 181
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Pred. No. 7e-60;
0; Mismatches 151;
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FILE REFERENCE: MPIO1-02591RNM
CURRENT APPLICATION NUMBER: US/10/163,316
CURRENT FILING DATE: 2002-06-05
PRIOR APPLICATION NUMBER: 60/297,863
PRIOR FILING DATE: 2001-06-13
NUMBER OF SEQ ID NOS: 10
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7
LENGTH: 968
RESULT 5
US-09-965-631-4
; Sequence 4, Application US/09965631
; Patent No. US20020115842A1
; GENERAL INFORMATION:
; APPLICANT: Friddle, Carl Johan
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APPLICANT: Kapeller-Libermann, Rosana
APPLICANT: Kapeller-Libermann, Rosana
TITLE OF INVENTION: 65552, A Human Matrix Metalloproteinase
TITLE OF INVENTION: Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/10163316 Publication No. US20020197703A1
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                                                                                                                                                                                                                                                                                                                                              TICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTS
                                                                                                                                                                                                                                                                             KGPEVTSNAALTLRNFCNWQKQHNSPSDRDPEHYDTAILFTRQDLCGSHTCDTLGMADVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -VPAGGGTSA----PWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPL 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGF--- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LDHSQPWSPCSAYMVTSFLDNGHGECLMDKPQNPI 455
                                                                                                                                         LDHSQPWSPCSAYMVTSFLDNGHGECLMDKPQNPI 472
                                                                                                                                                                                                        TVCDPSRSCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKHCASLNGVTGDSHLMASMLSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TVGRSPGSEAQHLDPTGDLAHCFYSGTVNGDPGSAAALSLCEGVRGAFYLQGEEFFIQP- 167
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Pred. No. 7.2e-60;
0; Mismatches 151;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---EDEELVLPSLERA- 71
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US-10-163-316-2
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US-10-163-316-2
                                            CURRENT APPLICATION NUMBER: US/10/163,316
CURRENT FILING DATE: 2002-06-05
PRIOR APPLICATION NUMBER: 60/297,863
PRIOR FILING DATE: 2001-06-13
NUMBER OF SEQ 1D NOS: 10
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ 1D NO 2
LENGTH: 823
                                                                                                                                                                                               Sequence 2, Application US/10163316
Publication No. US20020197703A1
GENERAL INFORMATION:
APPLICANT: Kapeller-Libermann, Rosana
TITLE OF INVENTION: 65552, A Human Matrix Metalloproteinase and Uses
TITLE OF INVENTION: Therefor
FILE REFERENCE: MP101-025P1RNM
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Best Local Similarity
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CURRENT FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: US 60/236,689
PRIOR FILING DATE: 2000-09-29
NUMBER OF SEQ ID NOS: 7
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TITLE OF INVENTION: No. US20020115842A1el Human
FILE REFERENCE: LEX-0241-USA
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TYPE: PRT
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             TYPE: PRT
ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HDNVKVCEEVFGKLRANHMMSPTLIQIDRANPWSACSAAITUFLDSGHGDCLLDQPSKP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGGGKVGYLVYAGGRRFLLDLERDGSVGIAGF-----VPAGG--GTSAPWRHRSHCFYR 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGDQGLIFQITAFQEDFYLHLTPDAQFLAPAFSTEHLGVPLQGLTGGSSDLR----RCFYS
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42.8%;
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Pred. No. 1.6e-55;
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RESULT 7
US-09-918-171A-9
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PRIOR FILING DATE: 1999-08-06
NUMBER OF SED ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 9
LENGTH: 905
                                                                                                                                                                                                              Best Local Similarity Matches 177; Conserv
                                                                                                                                                                                                                                Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 9, Application US/09918171A Patent No. US20020110894A1
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Best Local
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TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/04193
CURRENT APPLICATION NUMBER: US/09/918,171A
CURRENT FILING DATE: 2001-07-30
CURRENT FILING DATE: 2001-07-30
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                                                                                                                                 CMPPLLLLLLQLP.
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61;
                                                                                                                                                                                                            Score 732.5; DB 10;
Pred. No. 2.1e-52;
1; Mismatches 185;
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Pred. No. 1.6e-55;
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                                                                                                                               PPPLVCGAPAGPGTGAQASELVVPTRLPGS 51
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US-10-097-597-12
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Best Local Similarity 57.6%;
Matches 133; Conservative 35
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SOFTWARE: Patentin version 3.0
SEQ ID NO 12
LENCTH: 727
TYPE: PRT
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APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12, Application US/10097597 Publication No. US20030022352A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 09/445,023
PRIOR FILING DATE: 1999-12-03
PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR FILING DATE: 1997-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Human ADAMTS-1 protein, gene encoding the same, TITLE OF INVENTION: pharmaceutical TITLE OF INVENTION: composition and method of immunologically anal FILE REFERENCE: 057092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/097,597
CURRENT FILING DATE: 2002-03-15
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                   LCGSHTCDTLGMADVGTVCDPSRSCSVIEDDGLQAAFTTAHELGHVFNMPHDDAKHCASL 180
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Ishida, Yukako
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US-10-097-580-12
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APPLICANT: Inoguchi, Eiji
APPLICANT: Hakozaki, Michinori
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CURRENT FILING DATE: 2002-03-15
PRIOR APPLICATION NUMBER: 09/445,023
                 CURRENT APPLICATION NUMBER: US/09/445,023A CURRENT FILING DATE: 1999-12-03
                                                      TITLE OF INVENTION: Human ADAMTS-1 protein, TITLE OF INVENTION: composition and method FILE REFERENCE: Q57092
                                                                                                                                                                   APPLICANT:
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PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR FILING DATE: 1997-06-03
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PRIOR APPLICATION NUMBER: JP 9-160422
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Hakozaki, Michinori
Ishioka, Keiko
Ishida, Yukako
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Kuno, Kouji
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Ishida, Yukako
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Best Local Similarity
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378 TLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKR 437
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                                 ILVIHDEQKGPEVTSNAALTLRNFCNWQKQHNPPSDRDAEHYDTAILFTRQDLCGSQTCD 128
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; PRIOR FILING DATE: 1997-06-03; NUMBER OF SEQ ID NOS: 14; SOFTWARE: PatentIn version 3.0; SEQ ID NO 12; LENGTH: 727; TYPE: PRT; ORGANISM: Mus sp. US-09-445-023A-12
                                                                                                                                                                                  ; ORGANISM: Homo sapiens 
US-10-097-597-1
                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR FILING DATE: 1997-06-03
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn version 3.0
SEQ ID NO 1
LENGTH: 727
TYPE: PRT
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CURRENT FILING DATE: 2002-03-15
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Hakozaki, Michinori
Ishioka, Keiko
Ishida, Yukako
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Kuno, Kouji
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CURRENT APPLICATION NUMBER: US/10/097,580
CURRENT EILING DATE: 2002-03-15
PRIOR APPLICATION NUMBER: 09/445,023
PRIOR FILING DATE: 1999-12-03
PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR FILING DATE: 1997-06-03
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 1
LENGTH: 727
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Publication No.
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TITLE OF INVENTION: Human ADAMTS-1 protein, gene encoding the same, pharmaceutical TITLE OF INVENTION: composition and method of immunologically analyzing human ADAMTS FILE REFERENCE: Q57092
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ORGANISM: Homo sapiens
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                                                          Inoguchi, Eiji .
Hakozaki, Michinori
Ishioka, Keiko
Ishida, Yukako
Matsushima, Kouji
Kuno, Kouji
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Hakozaki, Michinori
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; ORGANISM: Homo Sapien US-10-174-590-352
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US-10-174-590-352
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NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
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Matches 132; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/174,590 CURRENT FILING DATE: 2002-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C42
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                                         63 PLAQRRRSKGLVQNIDQLYSGGGKVGYL--VYAGGRRFLLDLERDGSVGIAGF------ 113
                                                                                                                                                                                        Local Similarity
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                                                                                 LVWLLLLLASLLP-----FPE 65
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Godowski, Paul J.
Gurney, Austin L.
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o. US20030008352A1
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27.6%;
57.9%;
                                                                                                                                                                                      25.2%; Score 657.5; DB 9 33.9%; Pred. No. 3.2e-46;
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Pred. No. 1.1e-51;
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C104
CURRENT APPLICATION NUMBER: US/10/176,758
CURRENT FILING DATE: 2002-06-21
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
ORGANISM: Homo Sapien
US-10-176-758-352
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                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 172; Conserv
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114 VPAGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGG-LDGFFAVKHARYTLKPLLRGP 172
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                                                                                                                           LVWLLLLLLASLLP
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                                                                                                                                                                                            Score 657.5; DB 9;
Pred. No. 3.2e-46;
3; Mismatches 156;
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

16	15	14	13	12	. 11	10	9	8	7	6	Ç	4	ω	N	ب	Result No.
307.5	312.5	340	341.5	341.5	353.5	382	384	393	394	418.5	455	457	532	577	896.5	Score
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		Q8tey8 homo sapien	Q8te55 homo sapien	Q8wxs8 homo sapien	Q9vf61 drosophila	Q8vhk4 mus musculu	Q8te57 homo sapien	Q8sxb0 drosophila	Q8te59 homo sapien	O8te60 homo sapien					Q8te58 homo sapien	Description

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9.0	9.0	9.1	9.1	9.1.	9.2	9.2	9.2	9.2	9.2	9.3	9.3	9.3	9.3	9.4	9.4	9.5	9.5	9.6	9.6	9.6	9.9	9.9	10.0	10.1	10.4	•	10.6	12.8
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ALIGNMENTS

	146 GGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHILRRKSPASGQGPMCNV 196	· Oy
	61 QEDEYLHLTPDAQFLAPAFSTEHLGVPLQGLTGGSSDLRRCFYSGDVNAEPDSFAAVSLC 120	Db
	QAPE-LLGGAEPGTYL	Qy
	1 MLLLGILTLAFAGRTAGGSEPEREVVVPIRLDPDINGRRYYWRGPEDSGDQGLIFQITAF 60	Db
	37 LLLLLASLLPSARLASPLPREEEIVFPEKLNGSVLPGSGTPARLLCRLQAF 88	Qy
9;	Matches 190; Conservative 71; Mismatches 136; Indels 39; Gaps	X 0
	37.8%;	J (0)
	SEQUENCE 950 AA; 103286 MW; 5DFBE18285CCCC3B CRC64;	SQ
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	seven novel human ADAMTSs, a family of metalloproteinases with	RŢ
	"Cloning, expression analysis, and structural characterization of	RT
	Lopez-Otin C.;	RA
	Cal S., Obaya A.J., Llamazares M., Garabaya C., Quesada V.,	RA
	MEDLINE~21856482; PubMed=11867212;	RX
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019791 PRELIMINARY;
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01-NOV-1996 (TREMBLIFEL 0
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01-DEC-2001 (TREMBLIFEL 1
F25H8.3 protein.
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Q95N24;
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Q1-DEC-2001 (TrEMBLrel. 19,
Q1-DEC-2001 (TrEMBLrel. 19,
Q1-JUN-2002 (TrEMBLrel. 21,
Aggrecanase-1 (Fragment).
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Equus caballus (Horse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
NCBI_TaxID-9796;
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InterPro; IPR000130; Zn_WTpeptdse.
PROSITE; PS50215; ADAM_MEPRO; 1.
PROSITE; PS00142; ZINC_PROTEASE; UI
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EMBL; Z69361; CAA93288.1; J
EMBL; Z69360; CAA93287.1; J
EMBL; Z69360; CAA93287.1; J
EMBL; Z69361; CAA93287.1; J
HSSP; P15167; IDTH.
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Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson Craxton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,
Gardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston L.,
Jones M., Kershaw J., Kirsten J., Lister N., Latreille P.,
Lightning J., Lloyd C., Mcmurray A., Mortimore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen
Smaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,
Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K., Waterston R.,
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.;
"2.2 M. of contiguous nucleotide sequence from chromosome III of C
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PROSITE; PS50215; ADAM_MEPRO; 1.

PROSITE; PS50092; TSP1; 6.

PROSITE; PS00142; ZINC_PROTEASE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF01421; Reprolysin; Pfam; PF00090; tsp_1; 14. SMART; SM00209; TSP1; 18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nemato
Rhabditidae; Peloderinae;
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 elegans."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; M12.135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Caenorhabditis elegans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-94150718; PubMed-7906398;
                                                                                                                                                                                                                                                                                                                                                                                                   209
                                                                                                                                                                                                                                                                                                                                                                                                                                           165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                     TQCLFDQP
                                                                                                                                                                                                                                  ASINVVVVKLIVLKTENAGPRITQNAQQTLQDFCRWQQYYNDPDDSSVQHHDVAILLTRK
                                                                                                                                                                                                                                                        ---IERKARSRRAANSWDHYVEVLVVADTKMYEYHGRSLEDYVLTLFSTVASIYRHQSLR
                                                                                                                                                                                                                                                                                                                                           GSPSPRPRRAKRFA-SLSRFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VQYLGQAPELLGG---AEPGTYLTGTING-DPESVASLHWDGGALLGVLQYRGAELHLQP
                                     -HCLLDKP
                                                                            STYMPVNKVCKFQSTKFDKTQFQNNFHIMAPTLEYNTHPWSWSPCSAGMLERFLENNRGQ
                                                                                                                                                                                                                                                                                                                                                                                                 IISGNGTEHDGASRHRQHLVRKFDPMHFKSFDHLNSTSVNETETTVATWQDQWEDV----
                                                                                                                                                                                                                                                                                                                                                                                                                                     LEGGTPNSAGGPG---AHILRRKSP-------ASGQGPMCNVKAPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VLYLDSEEEVRGGMSRTDPDCIYRAHVKGVHQHSIVNLCDSEDGLYGMLALPSGIHTVEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ဟ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR001590; Reprolysin.
IPR000884; TSP1.
IPR000130; Zn_MTpeptdse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2165 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
508
                                     428
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61;
                                                                                                               -TSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 532; DB 5;
Pred. No. 8.8e-32;
1; Mismatches 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UNKNOWN_1.
FCC3DA8AAA9C4888 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 2165;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shownkeen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56;
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ACO DE PRESENTA DE
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RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Sutron G.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutron G.G., Wortman J.R., Yandell M.D., Zhang O., Chen L.X.,
RA Brandon R.C., Rogers Y.H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Ballew R.M., Basu A., Baxendale J., Bayaktaroglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Bayaktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Borkova D., Botchan A.E., Garg N.S., Gabartt M.M., Classer K.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Lia, S., Fleischmann W.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Noshmann W.,
RA Jalali M., Kalush F., Karpen G., Ke Z., Kennison J.A., Ketchum K.A.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Harli B., Walner R., Navon K., Nusskern D.R., Pacleb J.M.,
RA Herkulco G., Milshina N. Y., Mobarry C., Morris J., Moshreii A.,
RA Hont T., Reison D.K., Stapleton M., Stupski M.P., Shen H.,
RA Shue B.C., Siden K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Shue B.C., Siden K.A., Rosen G., Scheeler F., Shen H.,
RA Shue B.C., Siden F., Restor C., Turner R., Venier E., Wang A.H., Wang X.,
Ra Jerny 
Pfam; PF00.562; Pep_M12B_propep; 1.
Pfam; PF00.421; Reprolysin; 1.
Pfam; PF00090; tsp_1; 2.
SMART; SM00209; TSP1; 2.
SMART; SM00209; TSP1; 2.
PROSITE; PS500215; ADAM_MEPRO; 1.
PROSITE; PS50092; TSP1; 1.
PROSITE; PS00142; ZINC_PROTEASE; UN
SEQUENCE 1054 AA; 118616 MW; DC
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Q9W493;
Q1-MAY-2000
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01-MAY-2000 (TrEMBLrel. 13,
01-DEC-2001 (TrEMBLrel. 19,
CG4096 protein.
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                                                                                                                                                                                                                                                                      FlyBase; FBgn0029791; CG4096.
InterPro; IPR002870; Pep_M12B_propep.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000884; TSP1.
InterPro; IPR000130; Zn_MTpeptdse.
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Last annotation updat
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       UNKNOWN_1.
DC15455555CB6212 CRC64;
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Best Local Similarity
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8TE56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, Metalloprotease disintegrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-21856482; PubMed-11867212;
MEDLINE-21856482; PubMed-11867212;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                "Cloning, expression analysis, and structural characterization seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and thrombospondin-I domains.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cal S., Obaya A.J.,
Lopez-Otin C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADAMTS17
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AJ315735; CAC86016.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gene 283:49-62(2002)
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                                                                                                                                                                                                                                                                                                                                                                                                      Integrin;
 278
                                                                                     173
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                                                                                                                                                                                                                                                                                               PCLLLPIVPLSWLVWLLLLLLASLLPSARLASPLPREEEI - - - - VFPEKLNGSVLPGSGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDKPEAPL 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRR-RRSISSPRHVETLIVADATMSAFH-RDLNGYLLTIMNMVSALYKDPSIGNSIEIVV 372
                                              FVETLVVADDKMAAFHGA-GLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEE
                                                                                                                                                                        LGGAEPGTYLTGTINGDPESVASLHWDG--GALLGVLQYRGAELHLQPLEGGTPNSAGGP 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NNCMTLGLANVGGMCKPKQSCSVNEDNGIMLSHTITHELGHNFGMFHDTAKIGCHPRVGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRLVILGSGEEGPQVG--PSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGV 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRRAKRFASLSRFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRNPVSLVV 266
GPQVGPSAAQTLRSFCAWQ-
                            TVETLVVADADMVQYHGAEAAQRFILTVMNMVYNMFQHQSLGIKINIQVTKLVLLRQRPA
                                                                                     FSGREHLIRRKWSLTPSPSAEAQRPEQLCKVLTEKKKPTWGRPSRDWRERRNAIRLTSEH
                                                                                                                GA---HILRRK-----SP-ASGQGP--MCNV-----KAPLGSPSP--RPRRAKRFASLSR
                                                                                                                                               GRPAELCFY-SGRVLGHPGSLVSLSACGAAGGLVGLIQLGQEQVLIQPL-----NNSQGP
                                                                                                                                                                                                       PRRRRPPRTPPAAPRARPGERALLLHLPAFGRDLYLQLRRDLRFLSRGFEVEEAGAARRR
                                                                                                                                                                                                                                   PPLVLPV------LLLLVWGLDPGTAVGDAAADVEVVLPWRVRPDDVHLPPLPAAPG
                                                                                                                                                                                                                                                                                                                                149;
                                                                                                                                                                                                                                                                                                                                                                                        Protease.
1095 AA;
                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                         121099 MW;
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43.7%; Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                            19.2%;
                                                                                                                                                                                                                                                                                                                                58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
17, with thrombospondin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                          Score 455; DB 4;
Pred. No. 2.9e-26;
                                                                                                                                                                                                                                                                                                                                Mismatches
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.9e-26;
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MEDLINE-21856482; Pubmed-11867212;
Cal S., Obaya A.J., Llamazares M.,
Lopez-Otin C.;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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ADAMTS18.
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                                                                                                                                                                            VGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVST--CDTLGMADVGTV
                                      CDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHD-NSKPCISLNGPLSTSRHVMAPVMAH
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CSKYRSCTINEDTGLGLAFTIAHESGHNFGMIHDGEGNPCRKAEG-----NIMSPTLTG
                                                                                                                                                                                                                                                                                                               TLVVADDKMAAFHGAG-LKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQ
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                                                                                                                            INHHADQSLNSFCQWQSALIGKNGKRHDH---AILLTGFDICSWKNEPCDTLGFAPTSGM
                                                                                                                                                                                                                                               TLVVADKKMVEKHGKGNVTTYILTVMKVSG-LFKDGTIGSDINVVVVSLILLEQEPGGLL
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01-JUN-2002
01-JUN-2002
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Q8TE59;
01-JUN-2002
01-JUN-2002
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ADAMTS-19.
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EMBL; AJ311904; CAC84565.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

MEDLINE-21856482; PubMed-11867212;
Cal S., Obaya A.J., Llamazares M., Garabaya C.,
Lopez-Otin C.;
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Eukaryota; Metazoa; (
Mammalia; Eutheria; F
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                                                                                                                                                                                                                                 vs---
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NCE 1207 AA; 134061 NW; AF36F6BF5886FDE2 CRC64;
                                                                                                                                                                                                                                 -WSRCSKEDLERFLRSKASNCLLQTNPQSVNSVMVPSKLP
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Best Local S
Matches 121
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01-JUN-2002
01-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Eukaryota; Metazoa; Arthropoda; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
SEQUENCE FROM N.A.
MEDLINE=21856482; PubMed=11867212;
Cal S., Obaya A.J., Llamazares M.,
Lopez-Otin C.;
"Cloning, expression analysis, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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GH16393p.
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Mammalia; Eutheria;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KFELGLDDFMSKLEQVQEEEQKSKSRKLNRKKRHYADVDNQVYTLEVLIAVDNSMKQFHG
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189867 MW;
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                                                   Garabaya C.,
     structural
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                                                                                                                                                                             Hominidae;
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     characterization
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OBVHK4;
Ol-MAR-2002 (TrEMBLrel. 20, Creat
Ol-MAR-2002 (TrEMBLrel. 21, Last
Ol-JUN-2002 (TrEMBLrel. 21, Last
Ol-JUN-2002 (TrEMBLrel. 21, Last
Ol-Marcell (Fragment).
Mus musculus (Mouse).
Selbaryota; Metazoa; Chordata; Cl
Eukaryota; Metazoa; Rodentia; Selbaryota; Eutheria; Rodentia; Selbaryota; Mammalia; Eutheria; Rodentia; Rodent
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EMBL; AJ315734; CAC86015.1; -.
                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Memmalia; Eutheria; NCBI_TaxID=10090;
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                                                                                                                                                                  Daikou S., Glaeser K.E., Horner A., Davies E.A. "Expression of murine aggrecanases."; "Expression (NOV-2001) to the EMBL/GenBank/DDBJ EMBL; AF449483; AAL68774.1;
                                                  SEQUENCE
                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                  AA;
                                                                                                                       ADAM_MEPRO;
                                                  12775 MW;
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Pred. No. 7.7e-21
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Sciurognathi; Muridae;
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                                                  941853E69F4526C3 CRC64;
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382;
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Length
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         RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Southon G.G., Wortman J.R., Yandell M.D., Zhang O., Chen L.X.

RA Brandon R.C., Rogers Y.-H.C., Blazed R.G., Champe M., Pfeiffer B.D., RA Man K.H., Doyle G., Baxter E.G., Helt G., Nelson C.R., Miklog G.L.G., RA Abril JF., Aglayani A., An H.-J., Andrews-Ffannkoch C., Baldwin D., Ballew R.M., Benos P.N., Berman B.P., Bhandari D., Bolshakov S., Becken R.Y., Benos P.N., Berman B.P., Bhandari D., Bolshakov S., Roberson K.Y., Benos P.N., Berman B.P., Bhandari D., Bolshakov S., Roberson K.C., Busam D.A., Butler H., Cadleu E., Center A., Chandra I., Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., Dowles R., Doube J., Diecz S. M., Cherry J.M., Cawley S., Dahlke C., Ferriera S., Fleischmann W., Rolles K., Couley S., Dahlke C., Ferriera S., Fleischmann W., Fosler C., Gabrieltan A.E., Garg N.S., Gebbart W.M., Glasser K., Dun P., Dorst K., Doup J. E., Downes M., Dugan-Rocha S., Dunkov B.C., Dun P., Barris M., Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., Flaisch R.A., Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegyam C., Jalail M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Almmel B.E., Kedira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Liang Y., Lin X., Lasko P., Lei Y., Levyltsky A.A., Li J., Li Z., Liang Y., Lin X., Lasko P., Lei Y., Levyltsky A.A., Li J., Li Z., Liang Y., Lin X., R.A., Melson D.R., Nelson K.A., Muxon K., Nusskern D.R., Pacleb J.M., Nelson D.R., Nelson K.A., Muxon K., Nusskern D.R., Pacleb J.M., R. A., Melson D.R., Nelson K.A., Muxon K., Nusskern D.R., Pacleb J.M., Mang X., Fleiger E., Spradling A.C., Stapleton M., Strong R., Sun E., Shen H., Kang X., Freedor C., Turner R., Venter E., Wang A.H., Wang X., Weinsen B.A., Weinsen B.A., Weinsen M., Shong G., Ahn, Wang X., Fahn M., Zhang G., Zhan Q., A., Ra, Stoly S., Tana M., Zhang G., Zhan Q., A., Ra, Stoly S., Shen H., Sheng G., Ra, Stoly S., Shen S., Shan M., Zhang G., Zhan Q., A., Rah, Wang S., Yao Q.A., Weinsen J.S., Pollard G., S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Adams M.D., Celniker S.E., Holt R.A., E
Amanatides P.G., Scherer S.E., Li P.W.,
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RESULT 12
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              SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE-21638061; PubMed-11779638;

BOIZ H., Ramirez A., von Brederlow B., Kubiso

"Characterization of ADAMTS14, a novel member

metalloproteinase family ";

Biochim. Biophys. Acta 1522:221-225(2001).

EMBL; AF358666, AAL4029-1;

InterPro; IPR001590; Reprolysin.

InterPro; IPR001590; Reprolysin.
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Q8WXS8;
Q1-MAR-2002 (TrEMBLrel. 2
Q1-MAR-2002 (TrEMBLrel. 2
Q1-JUN-2002 (TrEMBLrel. 2
A disintegrin-like and me
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SMART; SM00209; TSP1; 3.

PROSITE; PS50215; ADAM_MEPRO; 2.

PROSITE; PS50092; TSP1; 2.

PROSITE; PS00142; ZINC_PROTEASE;
                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; P
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Pfam; PF01562; Pep_M12B_propep; 1.
Pfam; PF01421; Reprolysin; 1.
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SEQUENCE
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119; Conserv
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28.3%; Pred. No. 2e
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QBTE55;
QBTE55;
O1-JUN-2002 (TrEMBLrel. 21, C
O1-JUN-2002 (TrEMBLrel. 21, L
O1-JUN-2002 (TrEMBLrel. 21, L
Metalloprotease-disintegrin p
ADAMTS14;
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PROSITE; PS50092; TSP1; 1.
Signal; Integrin; Protease; Metalloprotease.
SIGNAL 1 22 POTENTIAL.
                                                                                "Cloning, expression analysis, and structural characterization seven novel human ADAMTSs, a family of metalloproteinases with disintegrin and thrombospondin-1 domains.";

Gene 283:49-62(2002)....
                                                                                                                                                                                                      Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutherla; Primates;
NCBI_TaxID=9606;
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                                                                                                                                           TISSUE-FETAL LUNG;
MEDLINE-21856482; PubMed-11867212;
Cal S., Obaya A.J., Llamazares M.,
                                                                                                                                                                                  SEQUENCE FROM N.A.
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109; Conserv
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 109; Conservative
                                               Protease.
1223 AA;
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133871 MW;
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           14.48; 27.88;
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Pred. No. 1.6
           Score 341.5;
Pred. No. 1.
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 ed. No. 1.6e-17;
Mismatches 170
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                                                                                                                                            Garabaya C.,
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RESULT 14
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Best Local
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08TEY8;
01-JUN-2002
01-JUN-2002
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                Li S.W., Prockop D.J., Lapiere C.M., Nusgens B.V.;
"Cloning and Characterization of ADAMTS-14, a Nove.
High Homology with ADAMTS-2 and ADAMTS-3.";
J. Biol. Chem. 277:5756-5766(2002).

EMBL; AF366351; AAL79814.1;
EMBL; AF366351; AAL79814.1;
SEQUENCE 1159 AA; 127336 MW; A5B130149BF7FF34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADAMTS14.
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE=21839041; PubMed=11741898;
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                                                                                                                                                                                                                                                                                                                                                                   Colige A., Vandenberghe I., Thiry M.,
                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
203
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CVYTGGVTGMPGAAVAISNCDG--LAGLIRTDSTDFFIEPLERGQQEKEASGRTHVVYRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYLTGTINGDP-ESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHILRRK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSVLPGSGTPARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQAPELLGGAEP----G
                         KMAAFHG-AGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSG-----
                                                                                                              CVYTGGVTGMPGAAVAISNCDG--LAGLIRTDSTDFFIEPLERGQQEKEASGRTHVVYRR
                                                                                                                                        TYLTGTINGDP-ESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHILRRK 184
                                                                                                                                                                   GTLWPGRVGRHSLYFNVTVFGKELHLRLRPNRRLVVPGSSVEWQEDFRELF---RQPLRQE
                                                                                                                                                                                               GSVLPGSGTPARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQAPELLGGAEP---G
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KMAAFHG-AGLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSG-----EEGPQV
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SVVRFHGKEHVQNYVLTLMNIVDEIYHDESLGVHINIALVRLIMVGYRQSLSLIERG---
                                                     EAVQQEWAEPDGDLHNEAFGLGDLPNLLGLVGDQLGDTERKRRHAKPGSYSIEVLLVVDD
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2 (TrEMBLrel.
2 (TrEMBLrel.
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                                                                                 SPASGQGPMCNVKAPLGSPSPRPRRAKRFASLSRF-VETLVVADD
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27.8%;
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Pred.
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RA George R.A., Levis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Boyers Y.-H.C., Blazej R.G., Champe M., Henderson S.N.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktarogiu L., Beasley E.M.,
RA Becson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Chariy J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Chorry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Code R., Deuther A., Deng Z., Mays A.D., Dew I., Dletz S.M.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriaz S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gunn P., Harris M.,
RA Harris N.L., Harvey D., Helman T.J., Wei M.-H., Ibeywam C.,
RA Harris N.L., Harvey D., Helman T.J., Wei M.-H., Ibeywam C.,
RA Harris N.L., Harvey D., Helman T.J., Wei M.-H., Ibeywam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Melson D.R., Nelson K.A., Hixon K., Nusskern D.R., Pacleb J.M.,
RA Melson D.R., Pattosh T.C., Mcleod M.P., McPherson D.,
RA Reinert K., Remington K., Sungers M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Mang Z.-Y., Wassaman D.A., Weinstock G.M., Weissenbach J.,
RA Weilson S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Weilson S.M., Noodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Weilson S.M., Shong W., Zhan M., Zhang G., Zhao Q., Zheng L.,
RA Jeng X.H., Shong F.M., Zhong W., Zhou S., Zhu X., Smith H.O.,
RA Jeng S., Yae R., F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
RA Jeng S., Shan M., Zhang S.,
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Musc
Ephydroidea; Drosophilidae; Drosophila.
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                                         EMBL; AE003458; AAF46905.1;
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Matches 121
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PROSITE; PS00125; ADAM_MEPRO; 1.
PROSITE; PS00142; ZINC_PROTEASE;
SEQUENCE 1091 AA; 124074 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                        51 LASPLPREEEIVFPEKLNGSVLPGSGTP-----ARLLCRLQAFGETLLLELEQDSGVQVE
                                                                                 C----GVSTCDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAAHELGHVFNMLHDNSKPC
                                                                                                             NFVLKRLEIWKSWDPPGLVRSRDVENYLNSFCKWQEKLNPFSDADPLHYDHALVLTGLDL
                                                                                                                             DSQLQFEPDAEEFNEPRRILRAQSQLQSPLRLRFQPRHHHPHQHHQQRRRRYIGDAPRSR
                                                                                                                                                                                                                                                                                                         GGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHIL***
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ISCD----PTMHIMSPKLG--SGKVTWSKCSRTYLEDFLMDPQAECLFDR
                         ISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGHCLLDK
                                                      VTYDKGKANSQVVGMATVKGMCTSIYSCTINEAKHFESVFVVAHEIGHNLGMRHDAKE--
                                                                                                                                                                   WSDIPEELFIETAIFVDSDLYAHMQKNFPTNTESKVVSFLLAMINGVQLLYHHPTLGRRI
                                                                                                                                                                                            -------FVETLVVADDKMAAF------HGAGLKRYLLTVMAAAAKAFKHPSIRNPV
                                                                                                                                                                                                                                                                               PGNVRGVFQQNGSDLVIHPLP----ARFGTGTHVLYQARVDKSGGGYSEASSRRTASPL
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25.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 312.5;
Pred. No. 2.4
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5B967382F12565BE CRC64;
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Search completed: April 21, 2003, 14:47:24 Job time : 58.3163 secs

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Minimum
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                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Gapop 10.0 , Gapext 0.5
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                          MSQTGSHPGRGLAGRWLWGA.....PEAPLHLPVTGDYKDDDDKG
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m Qy 361 HELGHVFNMLHDNSKPCISLN te	Oy 301 Db 301	. Qy 241 u Db 241	al Qy 181 LRRKSPASGOGPMCNVKAPLC or	Qy 121 Db 121	O Oy 61	Qy 1 Db 1	Ouery Match 97.8%; te Best Local Similarity 99.1%; te Matches 440; Conservative	41 146 6.2 419 2 4 42 144 6.1 203 2 s 43 143 6.0 202 2 J 44 143 6.0 205 2 S 44 143 6.0 825 2 S 45 141.5 6.0 825 2 S 45 141.5 6.0 825 2 S RESULT 1 T00355 T00355 C; Species: Homo saptens (man) C; Species: Homo saptens (man) C; Accession: T0035 R; Ishikawa, K; Nagase, T; Suyama DNA Res: 5. 169-176, 1998 A; Title: Prediction of the coding A; Reserence number: Z14142; MUID: 9 A; Accession: T00355 A; Status: preliminary; translated A; Molecule type: mRNA A; Residues: 1-837 < ISH) A; Cross-references: EMBL: AB014588; A; Cross-references: EMBL: AB014588; A; Gene: KIAA0688 C; Superfamily: thrombospondin type F; 519-575/Domain: thrombospondin type
HELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEDWSPCSARFITDFLDNGY 420 	TPEDSDPDHFDTAILFTRODLCGVSTCDTLGMADVGTVCDPARSCAIVEDDGLOSAFTAA 360 	YLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN 300 	LRRKSPASGOGPMCNVKAPLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKR 240 	GAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI 180 	IVFPEKLNGSVLPGSGTPARLLCRLQAFGETLLLELEQDSGVQVEGLTVQYLGQAPELLG 120 	MSQTGSHPGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLASLLPSARLASPLPREEE 60 	8; Score 2318; DB 2; Length 837; 8; Pred. No. 2e-172; 0; Mismatches 4; Indels 0; Gaps 0;	59414 46443 62550 55059 55060 ALIGNMENTS ALIGNMENTS ALIGNMENTS AL

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RESULT 3
T21371
hypothetical protein F25H8.3 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change C;Accession: T21371; T24896 R;Gajadsty, S. submitted to the EMBL Data Library, February 1996
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C;Species: Mus musculus (house mouse)
C;Date: 22-Jan-1999 #sequence_revision 22-Jan-1999 #text_change 21-Jul-2000
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A;Gene: ADAMTS-1
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R;Kuno, K.; Lizasa, H.; Ohno, S.; Matsushima, Genomics 46, 466-471, 1997
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                                                                                                                                                                                                     LHLKLQPDSGFLAPGFTLQTVGRSP----GSEAQHLDPTGDLAHCFYSGTVNGDPGSAAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLLELEQDSGVQVEGLTVQYLGQAPELLGGAE-----PGTYLTGTINGDPESVAS
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46.8%; Pred. No. 4.5e-68;
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A; Map position: 4
A; Introns: 31/1; 52/
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R;Colige, A.; Nusgens, B.V.; Lapiere, C.M.
submitted to the EMBL Data Library, February 1996
A;Description: Cloning of the cDNA of the bovine prod
A;Reference number: 218941
A;Accession: T18517
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1205 <COL>
A;Cross-references: EMBL:X96389; NID:e990769; PID:e22
A;Experimental source: skin
C;Genetics:
A;Gene: PC I-NP
                                                                                                                                                                                                                                                                                                                            N;Alternate names: procollagen N-proteinase
C;Species: Bos primigenius taurus (cattle)
C;Date: 15-Oct.1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T18517
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A;Accession: T24896
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A;Cross-references: EMBL:269360; PIDN:CAA93287.1; GA:Experimental source: clone f25H8
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Pred. No. 8.5e-33;
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meltrin alpha - mouse
C;Species: Mus musculus (house mouse)
C;Date: 10-Apr-1996 #sequence_revision 19-Apr-1996 #text_change 20-Jun-2000
C;Accession: S60257
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A:Description: catalyzes cleavage of the propeptides of type I and II collagens
C:Keywords: hydrolase; metalloproteinase
                                                                                                                                                    C;Superfamily: mouse meltrin alpha; disintegrin F;421-503/Domain: disintegrin homology cDIS> F;349/Active site: Cln #e*****
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Nature 377, 652-656, 1995
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A; Residues: 1-903 <YAG>
                                                                                                                                                                                                                                           A;Status: preliminary; nucleic acid sequence not shown
                                                                                                     Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NHEDGFSSAFVVAHETGHVLGMEHDGQGNRC - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VEDDGLQSAFTAAHELGHVFNMLHD-NSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SLENVCRWAYLQQKPDTDHDEYHDHAIFLTRQDF-GPSGMQ--GYAPVTGMCHPVRSCTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TLRSFCAWQRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAI 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VQFHGTEHVQKYLLTLMNIVNEIYHDESLGAHINVVLVRIILLSYGKSMSLIEIG-NPSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAFHGA-GLKRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGP--QVGPSAAQ 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APLGSP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VALSNCDG--LAGLIRMEEEEFFIEPLEKGLAAKEAEQGRVHVVYHR-PTTSRPP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VASLHWDGGALLGVLQYRGAELHLQPLEGGTPNSAGGPG-AHILRRKSPASGQGPMCNVK 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VFGRDLHLRLRPNARLVAPGATVEWQGES-----GATRVEPLLGTCLYVGDVAGLAESSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ERILAVPVRTDAQGRLVSHVVSAATAPAGVRTRRAAPAQIPGLSGGSEEDPGGRLFYNVT 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EEEIVFP-----EKLNGSVLPGSGTPA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPAGAAGR------LLCPA------LLLLLLLPLPADARLAAAAADPPGGPQGHGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGRGLAGRWLWGAQPCLLLPIVPLSWLVWLLLLLLLASLLPSARLASPLP-----R
                             LLLALAGALLAPRAARGMSLWDQRGAYEVARASLLSKDPGIPGQSIPAKDHPDVLTVQLQ 74
                                                          LLLLLASLLPSARLASPLPREEEIVFPEKLNGSVL-----PGSGTPAR-----LLCRLQ 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -PLGGPQALDTGISADSLDSLSRALGVLEERVNSSRRRMRRHAADDDYNIEVLLGVDDSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AFGETLLLELEQDSGVQVEGLTVQYLGQAPELLGGA---EP--GTYL-TGTING--DPES
AFGETLLLELEQDSGVQVEGLT-VQYL--GQAPELLGGAEPGTYLTGTINGDPESVASLH 143
                                                                                           108;
                                                                                                                                                  site: Glu #status predicted
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                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15.28;
                                                                                        10.5%; Score 249.5; DB 2; 25.7%; Pred. No. 2.8e-11; tive 62; Mismatches 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           464
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Pred. No. 9.1e-20;
5; Mismatches 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----SPRPRRAKRFASLSRFVETLVVADDKM 230
                                                                                                                                                                                                                                                                          PMID:7566181
                                                                                                                                                                                                                                                                                                                   T.; Kamijo, K.; Nabeshima,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GDEVRLGSIMAPLVQAAFHRFHWSR
                                                                                                                                                                                                PIDN:BAA08912.1; PID:g1054587
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                                                                                                                    Length
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Matches
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                       254
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232
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                                                                                                                                                                                63
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RYMYI - - DISLAG - -
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C:Superfamily: atrolysin C
(Keywords: hydrolase; metalloproteinase; zinc
(Keywords: hydrolase; metalloproteinase; zinc
F:19-Domain: signal sequence #status predicted <SIG>
F:19-187/Domain: propeptide #status predicted <PRO>
F:188-407/Product: metalloproteinase #status experimental <MAT>
F:304-384,344-351,346-368/Disulfide bonds: #status predicted
F:329,333,339/Binding site: zinc, catalytic (His) #status predicted
F:330/Active site: Glu #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        metalloproteinase (EC 3.4.24.) precursor - southern copperhead C;Species: Agkistrodon contortrix contortrix (southern copperhead) C;Date: 17-Dec-1996 #sequence_revision 13-Mar-1997 #text_change 22-Jun-1999 C;Accession: S66260; S74263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Selistre de Araujo, H.S.; Ownby, C.L.
Arch. Biochem. Biophys: 320, 141-148, 1995
A;Title: Wolecular cloning and sequence analysis of cDNAs for metalloproteinases
A;Reference number: S66259; MUID:95314311; PMID:7793974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein A; Residues: 188-206 <SEA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: S74263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Cross-references: EMBL: U18234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-407 <SEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: S66260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity es 115; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLVTLCLAAFPYQGSSIILESGNVNDYEVVYPRKVTPVPKGAVQPKYEDAMQY--ELKVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLLLLLASLLP----SARLASPLPREEEIVFPEKL----NGSVLPGSGTPARLLCRLQAF 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIV---EDDGLQSAFTAAHELGHVFNM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIRNPVSLVVTRLVILG----SGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDT
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                                                                      YEP----IKKASQLNLNYQYQRYVELVTVVDHGMYTKYNGDSDKIRQWVHQMVNTMKESY
                                                                                                                                         PSPRPRRAKRFASLS-----RFVETLVVADDKM-AAFHGAG--LKRYLLTVMAAAAKAF
                                                                                                                                                                                                                                                                                   GGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHILRRKSPASGQG---PMCNVKAPLGS
                                                                                                                                                                                                                                                                                                                                                         GEPVVLHLERNKGLFSKDYSETHYSPDGRKITTYPPVEDHCYYHGRIQNDADSIASISAC 122
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KHPSIRNPV$LVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDH---F
                                                                                                                                                                                                                NG-LKGHFKLQGEMYLIEPLE-----LSDSEAHAVFKYENVEKEDEAPKICGVTQNWES
                                                                                                                                                                                                                                                                                                                                                                                                                                GETLLLELEQDSGVQVEGLTVQYL---GQAPELLGGAEPGTYLTGTINGDPESVASLHWD 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10.5%; Score 248.5; DB 2
26.4%; Pred. No. 1.2e-11;
tive 72; Mismatches 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NID:g603216;
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N;Contains: hemorrhagic proteinase (EC 3.4.2.); platelet aggregation inhibitor
C;Species: Trimeresurus gramineus (Indian green tree viper)
C;Date: 16-Sep-1992 #sequence_revision 16-Sep-1992 #text_change 18-Jun-1999
C;Accession: S12589; A30065; A29784
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Superfamily: trigramin precursor; disintegrin homology
C;Keywords: anticoagulant; glycoprotein; hydrolase; metalloproteinase; venom;
F;1-18/Domain: signal sequence #status predicted <SIG>
F;398-476/Domain: disintegrin homology <DIS
F;398-476/Domain: disintegrin homology <DIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Huang, T.F.; Holt, J.C.; Lukasiewicz, H.; Niewiarowski, J. Biol. Chem. 262, 16157-16163, 1987
A;Title: Trigramin. A low molecular weight peptide inhibi A;Reference number: A29784; MUID:88058981; PMID:3680247
A;Accession: A29784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Title: Trigramin: primary structure and its inhibition A; Reference number: A30065; MUID:89229063; PMID:2653425 A; Accession: A30065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:X51530; NID:g64407; PIDN:CAA35910.1; A;Note: translation of the signal sequence and the mature prot R;Huang, T.F.; Holt, J.C.; Kirby, E.P.; Niewlarowski, S. Biochemistry 28, 661-666, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic Acids Res. 18, 4255, 1990.

A; Title: Sequence of a cDNA encoding the platelet aggregation A; Reference number: $12589; MUID:90332429; PMID:2377470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein A; Residues: 408-419 <HU2>
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A; Residues: 1-480 <NEE>
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                                                                                                                  GGALLGYLQYRGAELHLQPLEGGTPNSAGGPGAH-ILRRKSPASGQGP--MCNV-----
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                                   ----KAPLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAK
                                                                                                                                                          GEPVVLHLEKNKGLESEDYSEIHYSPDGREITAYPSVEDHCYYHGRIENDADSTASISAC
                                                                                                                                                                                                  GETLLLELEQDSGVQVEGLT-VQYLGQAPELLG--GAEPGTYLTGTINGDPESVASLHWD 145
                                                                                                                                                                                                                                          LLITICLAVFPYQGSSIILESGNLNDYEVVYPEKV--TALPKGAVQQKYEDAMQYEFKVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NKPLRTDTVSTPVSGD 402
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Pred. No. 1.2e-10;
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A;Cross-references: GB:M89784; NID:g213029; PIDN:AAB00731.1; PID:g213030 C;Comment: A disintegrin termed crotatroxin has been isolated from the venom 72, including the replacement of the cell attachment motif R-G-D present in C;Superfamily: trigramin precursor; disintegrin homology C;Keywords: hydrolase; metalloproteinase; venom; zinc; zymogen F;I-18/Domain: signal sequence *status predicted <SIG> F;I9-18/Jomain: propeptide *status predicted <PRO> F;188-389/Product: hemorrhagic proteinase *status predicted <MAT> F;396-474/Domain: disintegrin homology <DISS C ACC-178/Domain: disintegrin homology <DIS
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Biochemistry 31, 6203-6211, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F:407-478/Product: disintegrin-like protein (crotatroxin homolog) *status F:456-458/Region: defective cell attachment motif (M·V·D) F:339,333,39/Binding site: zinc, catalytic (HIs) *status predicted F:330/Active site: Glu *status predicted
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A; Residues: 1-478 <HIT>
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                                                                                                                                  ---KESYTYMYIDILLAGIEIWSNGDL-INVQPASPNTLNSFGEWRETDLLKRKSHDNAQ
                                                                                                                                                                                                                    KAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAW-QRGLNTPEDSDPDH
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22-Jun-1999

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A; Molecule type: protein
A; Residues: 191-393 <SHA>
A; Residues: 191-393 <SHA>
A; Note: 204-11e was also found
A; Note: a variant lacking 192-Gln was also found
C; Superfamily: atrolysin C
C; Keywords: hydrolase; metalloproteinase; pyroglutamic acid; venom; zinc
F; 11-12/Domain: signal sequence #status predicted <SIG>
F; 11-19/Domain: amino-terminal propeptide #status predicted <PRO>
F; 191-393/Product: atrolysin C #status experimental <AMT>
F; 394-414/Domain: carboxyl-terminal propeptide #status predicted <CPT>
F; 391/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) if $133,337,343/Binding site: zinc (His) #status experimental
F; 333,337,343/Binding site: zinc (His) #status predicted
F; 334/Active site: Glu #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:U01237; NID:g402263; PIDN:AAA03352.1; R;Shannon, J.D.; Baramova, E.N.; Bjarnason, J.B.; Fox, J.W. J. Biol. Chem. 264, 11575-11583, 1989
A;Title: Amino acid sequence of a Crotalus atrox venom metall A;Reference number: A34166; MUID:89308543; PMID:2745407
A;Accession: A34166
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R;Hite, L.A.; Jia, L.G.; Bjarnason, J.B.; Fox, J.W.
Arch. Biochem. Biophys. 308, 182-191, 1994
A;Title: cDNA sequences for four snake venom metalloproteinases:
A;Reference number: $41607; MUID:94145078; PMID:8311451
A;Accession: $41610
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A; Residues: 1-414 <HIT>
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                      DPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIVEDD----GLQSAFTAAHE
                                                                        VNFINGFYRSLNIHVSL--TDLEI-WSNEDQINIQSASSDTLNAFAEWRETDLLNRKS--
                                                                                                                                                                                                              PSPRPRRAKRFASLS-----RFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKA
                                                                                                                                                                                                                                                             NG-LKGHFKLQGEMYLIEPLE-----LSDSEAHAVFKLENVEKEDEAPKMCGVTQNWES
                                                                                                                                                                                                                                                                                                               GGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI----LRRKSPASGQGPMCNVKAPLGS
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                                                                                                                                                                                                                                                                                                                                                                                                         GETLLLELEODSGVQVEGLTVQYL---GOAPELLGGAEPGTYLTGTINGDPESVASLHWD
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                                                                                                                                                                    ---IKKASDLNLNPDQQNLPQRYIELVVVADHRVFMKYNSDLN---
                                                                                                                  --HPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRG--LNTPEDS
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Pred. No. 8.9e-10;
4; Mismatches 186
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F;13-190/Domain: amino-terminal propeptide *status predicted <PRO>
F;19-190/Product: atrolysin C *status experimental <MAT>
F;394-414/Domain: carboxyl-terminal propeptide *status predicted <CPT>
F;394-414/Domain: carboxyl-terminal propeptide *status predicted <CPT>
F;191/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) *status exper
F;308-388,348-355/Disulfide bonds: *status predicted
F;308-388,348-355/Disulfide bonds: *status predicted
F;333,337,343/Binding site: zinc (His) *status predicted
F;334/Active site: Glu *status predicted
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A;Accession: S41609
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C;Keywords: hydrolase; metalloproteinase; pyroglutamic acid;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  PSPRPRRAKRFASLS-----
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CILNKPLRIDPVSTPVSGN
                                            CLLDKPEA -- PLHLPVTGD 439
                                                                                                                                                                                                                                                                                    VNFINGFYRSLNIHVSL--TDLEI-WSNEDQINIQSASSDTLNAFAEWRETDLLNRKS--
                                                                                                                                                                                                                                                                                                                                                                                  YEP----IKKASDLNLNPDQQNLPQRYIELVVVADHRVFMKYNSDLN----TIRTRVHEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NG-LKGHFKLQGELYLIEPLE-----LSDSEAHAVFKLENVEKEDEAPKMCGVTQNWES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHI----LRRKSPASGQGPMCNVKAPLGS
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115; Conserv
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                                                                                            LGHNLGMEHD-GKDCLR-----GASLCIMRPGLTKGRSYE-FSADSMHYYERFLKQYKPQ
                                                                                                                                   LGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGYGH
                                                                                                                                                                                                                                  DPDHFDTAILFTRODLCGVSTCDTLGMADVGTVCDPARSCAIVEDD----GLQSAFTAAHE
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                                                                                                                                                                                        ----HDNAQLLTAIEL----DEETLGLAPLGTMCDPKLSIGIVQDHSPINLLMGVTMAHE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.3%;
26.2%;
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406
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 220.5; DB 2
Pred. No. 1.8e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                               -RFVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKA
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A·Residues: 331-341 <GUA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Guan, A.L.; Retzios, A.D.; Henderson, G.1 Arch. Biochem. Biophys. 289, 197-207, 1991 A;Title: Purification and characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Molecule type: protein
A; Residues: 191-192, 'R',194-199,'O',201-240,'O',242,'T',244-357,'AAM',361-381,'T',383-39
A; Note: 379-Glu and 382-Leu were also found
A; Note: a variant lacking 192-Gln was also found
A; Note: a variant lacking 192-Gln was also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: Amino acid sequence of fibrolase, A;Reference number: A37303; MUID:93278288; A;Accession: A41827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Selistre de Araujo, H.S.; Ownby, C.L.
Arch. Biochem. Biophys. 320, 141-148, 1995
A;Title: Molecular cloning and sequence analysis of cDN.
A;Reference number: S66259; MUID:95314311; PMID:7793974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fibrolase (EC 3.4.24.*) precursor - southern copperhead C;Species: Agkistrodon contortrix contortrix (southern copperhead) C;Date: 30-Sep-192 #sequence_revision 09-Apr-1998 #text_change 18 C;Accession: S66259; A41827; S25461; A37303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: S25461
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Randolph, A.; Chamberlain, S
Protein Sci. 1, 590-600, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Cross-references: EMBL:U18233; NI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Superfamily: atrolysin C
Keywords: hydrolase; metalloproteinase; pyroglutamic acid;
Keywords: hydrolase; metalloproteinase; pyroglutamic acid;
1-18/Domain: signal sequence #status predicted <PRO>
19-190/Domain: propeptide #status predicted <PRO>
191-411/Product: fibrolase #status experimental <MATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: S66259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Modified site: pyrrolidone carboxylic acid (Gln) (in mature -388/Disulfide bonds: #status experimental
                                                                                                 250 AKAFKHPSIRNPVSLVVTRLVILG----SGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDS 305
                                                                                                                                                                                                                                                      123
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  D---PDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIVEDD---GLQSAFTA 359
                                                                                                                                                                                                  PSPRPRRAKRFASLS-------RFVETLVVADDKM-AAFHGAG--LKRYLLTVMAAA 249
                                                                                                                                                                                                                                                 NG-LKGHEKLQGEMYLIEPLE-----LSDSEAHAVYKYENVEKEDEAPKMCGYTQNWES 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            350-372/Disulfide bonds: #status predicted
                                                                                                                                                    YEP----IKKAFQLNLTPEQQGFPQRYVELVIVADHRMNTKYNGDSDKIRQWVHQIVNTI 231
                                                                                                                                                                                                                                                                                                 GGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHTLRRKSPASGQG----PMCNVKAPLGS
                                                                                                                                                                                                                                                                                                                                               GEPVVLHLEKNKGLFSEDYSETHYSPDGREITTYPLVEDHCYYHGRIENDADSTASISAC 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLLLLLASLLP----SARLASPLPREEEIVFPEKL----NGSVLPGSGTPARLLCRLQAF 88
                                                                                                                                                                                                                                                                                                                                                                                                GETLLLELEQDSGVQVEGLTVQYL---GQAPELLGGAEPGTYLTGTINGDPESVASLHWD 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLVTLCLAAFPYQGSSIILESGNVNDYEVVYPRKVTPVPRGAVQPKYEDAMQY--EFKYN 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             al Similarity
107; Conserv
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                                                   -PLNI - - - RFALVGLEIWSNQDLITVTSVSHDTLASFGNWR - - - - - - ET
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0; MUID:91378546;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 3.7e
2; Mismatches
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Pred. No. 3.7
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Markland Jr.,
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A:Molecule type: protein
A:Residues: 189-286, 'T', 288-391 <CHU>
C:Comment: Rhodostomin (kistrin) is a human platelet aggregation
C:Superfamily: trigramin precursor; disintegrin homology
C:Keywords: anticoagulant; glycoprotein; hydrolase; metalloprotei
F:1-18/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N;Contains: hemorrhagic proteinase (EC 3.4.24.); platelet aggregation inhit c;Species: Calloselasma rhodostoma (Malayan pit viper) C;Date: 31-Mar-1992 #sequence_revision 03-May-1994 #text_change 22-Jun-1999 C;Accession: S33792; J01301; A37480; A61579; B35982; S68308; S33726 R;Au, L.C.; Chou, J.S.; Chang, K.J.; Teh, G.W.; Lin, S.B. Blochim. Biophys. Acta 1173, 243-245, 1993 A;Title: Nucleotide sequence of a full-length cDNA encoding a common precurs A;Reference number: S33792; MUID:93277962; PMID:7916635 A;Accession: S33792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A:Molecule type: protein
A:Residues: 189, 'L', 191-200, 'XX', 203-204, 'Y', 206, 'X', 208
R:Dennis, M.S.; Henzel, W.J.; Pitti, R.M.; Lipari, M.T.;
Proc. Natl. Acad. Sci. U.S.A. 87, 2471-2475, 1990
A:Title: Platelet glycoprotein IIb-IIIa protein antagonis
A:Reference number: A35982; MUID:90207217; PMID:2320569
                                                                                                                                                                                                                                                                                                    R:Chung, M.C.M.; Ponnudurai,
Arch. Biochem. Biophys. 325,
A;Title: Structural studies (
A;Reference number: S68308; I
A;Accession: S68308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Note: this sequence was derived from the amino end of a 34K R;Bando, E.; Nikai, T.; Sugihara, H. Int. J. Biochem. 23 1193-1199, 1991 A;Title: Hemorrhagic protease from the venom of Calloselasma A;Reference number: A61579; MUID:92175156; PMID:1794444 A;Accession: A61579
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F;408-475/Product: rhodostomin (kistrin) #status experimental <RHO>F;456-458/Region: cell attachment (R-G-D) motif
                                              F;189-391/Product: hemorrhagic proteinase #status F;396-474/Domain: disintegrin homology <DIS>
                                                                                                      F;19-188/Domain: propeptide #status predicted <PRO>
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Toxicon 31, 997-1005,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Experimental source: venom gland R; Ponnudurai, G.; Chung, M.C.M.; Tan, N.H.
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A; Residues: 77-478 <AUL>
A; Cross-references: GB: M75916
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:L08780; GB:M75916; NID:g304539; PIDN:AAA49196.1; R;Au, L.C.; Huang, Y.B.; Huang, T.F.; Teh, G.W.; Lin, H.H.; Choo, K.B. Biochem. Biophys. Res. Commun. 181, 585-593, 1991
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A; Residues: 1-478 < AUA>
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: Chung,
1993
                                                                                                                                                                                                                                                                                                                                  i, G.; Kataoka, M.
5, 199-208, 1996
s of a major hemo;
; MUID:96139300; I
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                                                                                                                                                                                                                                                                                                                                  hemorrhagin (rhodostoxin)
300; pMID:8561498
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РМID:8212052
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                                                                            predicted <HEM>
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A; Residues: 237-251 <HU2>
A; Experimental source: venom gland
C; Comment: The proteolytic activity is inhibited by EDTA or phenanthroline.
C; Superfamily: trigramin precursor; disintegrin homology
C; Keywords: anticoagulant; hydrolase; metalloproteinase; venom; zinc
F; 11-18/Domain: signal sequence #status predicted <SIG>
F; 19-187/Domain: propeptide #status predicted <PRO>
F: 188-392/Product: fibrinolytic proteinase #status predicted <MAT>
F; 399-477/Domain: disintegrin homology <DIS>
F; 411-478/Product: disintegrin homology <DIS>
F; 411-478/Product: disintegrin #status predicted <DNT>
F; 413-461/Region: cell attachment (R-G-D) motif
F; 459-461/Region: cell attachment (R-G-D) motif
                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: JC4342; PC4108
R;Huang, K.F.; Hung, C.C.; Pan, F.M.; Chow, L.P.; Tsugite
Blochem. Blophys. Res. Commun. 216, 223-233, 1995
A;Title: Characterization of multiple metalloproteinases
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A;Accession: PC4108
A;Molecule type: protein
A;Residues: 237-251 <HUZ>
                                                                                                                                                                                                                                                                                                                                             A; Reference number: JC4342; A; Accession: JC4342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Trimeresurus mucrosquamatus (Chinese habu)
C;Date: 21-Dec:1995 #sequence_revision 08-Feb-1996 #text_change
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                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-481 <HUA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N; Alternate names: fibrinogenolytic proteinase
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Best Local
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C; Superfamily: mouse meltrin
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A; Residues: 1-609 < ZHO>
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A;Title: Molecular cloning and expression of catrocollastatin,
A;Reference number: S55264; MUID:95251603; PMID:7733877
A;Accession: S55270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Zhou, Q.; Smith, J.B.; Grossman, M.H. Biochem. J. 307, 411-417, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          catrocollastatin precursor - western diamondback rattlesnake c;Species: Crotalus atrox (western diamondback rattlesnake) C;Date: 05-Dec-1998 #sequence_revision 05-Dec-1998 #text_change C;Accession: S55270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:U21003; NID:g710353; PIDN:AAC59672.1; C;Superfamily: mouse meltrin alpha; disintegrin homology
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Best Local Similarity
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FKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNTPEDSDPDHFDT
                                            YEPIKKASQLVVTAEHQKYNPFRFVELFLVVDKAMVTKNNGDLDKIKTRMYEIVNTVNEI
                                                                                           PSPRPRRAKRFASLS-----RFVETLVVADDKMAAFHGAGL---KRYLLTVMAAAAKA 252
                                                                                                                                             NG-LKGHFKLQGEMYLTEPLK---LPDSE----AHAVYKYENVEKEDEALKMCGVTQNWES
                                                                                                                                                                                                                                                 GEPVVLHLGKNKGLFSKDYSETHYSPDGREITTYPLVEDHCYYHGRIENDADSTASISAC
                                                                                                                                                                                                                                                                                                  GETLLLELEQDSGVQVEGLTVQYL----GQAPELLGGAEPGTYLTGTINGDPESVASLHWD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LGSGEEGPQVGPSAAQTLRSFCAW-QRGLNTPEDSDPDHFDTAILFTRQDLCGVSTCDTL 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YIELAIVVDHGMHTKYSSNFKKIRKRV-----HQMVSNMNEMCRPLNIAITLALLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FVETLVVADDKMAAFHGAGLKRYLLTVMAAAAKAFKHPSIRN-----PVSLVVT-RLVI 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSDSEAHAVFKYENVEKEDEAPKMCGVTQNWESDESIKKASQLYLTPEQQRFPQ-----R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GQAPELLGGAEPGTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGGTPNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                     107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.9%; ilarity 25.4%; Conservative 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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24.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 210.5;
Pred. No. 1.
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4; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.8e-08;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  182;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fibrinolytic metalloproteinase (EC 3.4.24.-) precursor - Vipera lebetina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Experimental source: venom

Superfamily: trigramin precursor; disintegrin homology;

Reywords: anticoagulant; glycoprotein; hydrolase; metalloproteinase; venom; zinc

1-18/Domain: signal sequence #status predicted <SIG>

19-191/Domain: activation peptide #status predicted <ACP>

19-2397/Product: fibrinolytic metalloproteinase #status predicted <MAT>

404-474/Domain: disintegrin homology <DIS>

404-475/Domain: disintegrin homology <DIS>

1405-475/Domain: disintegrin #status predicted <DNT>

1406-475/Domain: disintegrin #status predicted <DNT>

1406-475/Domain: disintegrin #status predicted <DNT>

1456-458/Region: cell attachment (R-G-D) motif

1710,337,341,347/Binding site: zinc, catalytic (Cys, His, His, His) (inhibited) #status

1337,341,347/Binding site: zinc, catalytic (His) (active) #status predicted

1337,341,347/Binding site: zinc, catalytic (His) (active) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Alternate names: lebetase Le3
;Species: Vipera lebetina
;Species: Vipera lebetina
;Date: 10-Sep-1996 #sequence_revision 18-Oct-1996 #text_change 20-Jun-2000;Date: 10-Sep-1996 #sequence_revision: JC4880; PC4181
;Accession: JC4880; PC4181
;Silgur, E.; Aaspollu, A.; Tu, A.T.; Silgur, J.
;Silgur, E.; Aaspollu, A.; Tu, A.T.; Silgur, J.
iochem. Biophys. Res. Commun. 224, 229-236, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match
Best Local Similarity
Matches 107; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecule type: protein Residues: 214-246 <SII2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cross-references: EMBL:X97894; NID:g1502367; PIDN:CAA66471.1; PID:g1502368 Accession: PC4181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Molecule type: mRNA
Residues: 1-478 <SII1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Accession: JC4880
302 PEDSDPDHFDTAILFTRQDLCGVSTCDT-LGMADVGTVCDPARSCAIVEDDGL---QSAF 357
                                                                                                                                                                        178 ASDEPIKKASQLNLTPEQQRFE----PRYIELVIVADHAMVTKYNGDL-----AA
                                                                                                                                                                                                                                       197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          287
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                                                      ITTWVHQLVNNINGFYRDLNVHITLSAVEVWTNGDL-INVQPAASVTLNLFGEWR-----
                                                                                                                                                                                                                                                                                          CNG-LKGYFTLRGETYLIEPLK--LPDSE----AHAVYKYENIEKEDEAPKMCGVTQTNW 177
                                                                                                                                                                                                                                                                                                                                          DGGALLGVLQYRGAELHLQPLEGGTPNSAGGPGAHILRR--KSPASGQGP-MCNV----- 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLVTICLAVEPYQGSSKTLKSGNVNDYEVVNPQAVTGLPKGAVKQPEKKYEDTMQYEFEV 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YRYMYIH--VALVGLE---IWSNEDKITVKPEAGYTLNAFGEWRK---TDLLTRKKH-DN
                                                                                                            AKAFKHPSIRN-----PVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLNT 301
                                                                                                                                                                                                            -----KAPLGSPSPRPRRAKREASLSREVETLVVADDKMAAFHGAGLKRYLLTVMAAA 249
                                                                                                                                                                                                                                                                                                                                                                                                         NGEPVVLHLEKNRGLFSKDYSETHYSPDGREITTNPAVEDHCYYHGRIQNDADSTASISA 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLLLLLASLLP.---SARLASPLPREEEIVFPEKLNGSVLPGSGTPAR-----LLCRLQA 87
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                FGETLLLELEQDSGVQVEGLT-VQYLGQAPELL--GGAEPGTYLTGTINGDPESVASLHW 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AQLLTAIDLDRV-----IGLAYVGSMCHPKRSTGIIQDYSEINLVVAVIMAHEMGHNLGI 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glu #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8.8%; Score 208.5; DB 2;
24.1%; Pred. No. 1.9e-08;
ative 69; Mismatches 189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 478;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fibrinolytic enzyme (lebetase)
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Search completed: April 21, 2003, 14:48:26 Job time: 30.6581 secs

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Title:
Perfect score:
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No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

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12: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

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length: 2000000000
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Gapop 10.0 , Gapext 0.5
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2370
                                                                                                                                                                                         Match
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 GenCore version Copyright (c) 1993 - 2003
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CURRENT FILING DATE: 2002-06-21
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENCTH: 837
TYPE: PRT
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Best Local Similarity
Matches 438; Conserv
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APPLICANT:
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Smith, Victoria
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US-10-175-737-352
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul
APPLICANT: Gurney, Austin
APPLICANT: Pan, James
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LENGTH: 837
TYPE: PRT
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CURRENT FILING DATE: 2002-06-19
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NUMBER OF SEQ ID NOS: 612
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TPEDSGPDHFDTAILFTRQDLCGVSTCDTLGMADVGTVCDPARSCAIVEDDGLQSAFTAA
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul
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Local Similarity 98.68;
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Godowski, Paul J.
Gurney, Austin L.
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Pred. No. 5.6e-178;
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CURRENT FILING DATE: 2002-06-19
Prior application removed - See File Wrapp
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
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Best Local Similarity
Matches 438; Conserv
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                                                                                                                                        INFORMATION:
GHCLLDKPEAPLHLPVTFPGKDYD
                     GHCLLDKPEAPLHLPVTGDYKDDD 444
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                                             HELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDNGY
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RESULT 6 US-10-175-752-352

Sequence 352, Appublication No.

Application US/10175752 b. US20030022295A1

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US-10-176-482-352
US-10-176-482-352
Sequence 352, Applica
Publication No. US200
GENERAL INFORMATION:
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US-10-175-752-352
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Best Local S
Matches 438
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SEQ ID NO 352
LENGTH: 837
TYPE: 7--
APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT:
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C60
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Local Similarity 98.6%;
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                                                                 Baker, Kevin P.
 Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                       Desnoyers, Luc
                                                    Chen, Jian
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Gurney, Austin L.
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                                                                                            Application US/10176482 o. US20030022296A1
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Pred. No. 5.6e-178;
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GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul
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Publication No.
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NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
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Best Local Similarity
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APPLICANT: Zhang Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C70
CURRENT APPLICATION NUMBER: US/10/176,482
CURRENT FILING DATE: 2002-06-20
CURRENT FILING DATE: 2002-06-20
                      TITLE
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F: Zhang, Zemin
INVENTION: SECRETED AND TRANSMEMBRANE
INVENTION: ACIDS ENCODING THE SAME
                                                 Smith, Victoria Watanabe, Colin K. Wood, William I.
                                                                                                                        Goddard, Audrey
Godowski, Paul
                                                                                                         Godowski, Paul J. Gurney, Austin L.
                                                                                             Pan, James
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NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
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Best Local (
Prior Application removed
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
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CURRENT APPLICATION NUMBER: US/10/176,757
CURRENT FILING DATE: 2002-66-20
                                                                                        APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C66
                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P.
                                                           CURRENT APPLICATION NUMBER: US/10/176,913
CURRENT FILING DATE: 2002-06-20
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Smith, Victoria
Watanabe, Colin K.
Wood, William I.
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Goddard, Audrey
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o. US20030022298A1
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US-10-180-552-352
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                                                                         SEQ ID NO 352
LENGTH: 837
TYPE: PRT
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APPLICANT: Chen, Jian
APPLICANT: Denoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul
APPLICANT: Guney, Austin
APPLICANT: Pan, James
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                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/180,552
CURRENT FILING DATE: 2002-06-25
                                                                                                                                                            APPLICANT: Zhang, Zemin TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C153
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Goddard, Audrey
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CURRENT APPLICATION NUMBER: US/10/180,557
CURRENT FILING DATE: 2002-06-25
Prior Application removed - See File Wrapper
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
ORGANISM: Homo Sapien
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Matches 438
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Publication No. US20030022301A1
GENERAL INFORMATION:
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Watanabe, Colin K.
Wood, William I.
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Gurney, Austin L.
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Goddard, Audrey
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                                                                                      Conservative
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Pred. No. 5.
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; LENCTH: 837
; TYPE: PRT
; ORGANISM: Homo Sapien
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Desnoyers, Luc
APPLICANT: Goddwski, Paul
APPLICANT: Goddwski, Paul
APPLICANT: Gurney, Austin I
APPLICANT: Pan, James
APPLICANT: Pan, James
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Best Local :
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APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C14
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Godowski, Paul
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Pred. No. 5.6e-178;
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Andrey
APPLICANT: Goddowski, Paul :
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LENGTH: 837
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Best Local
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P9430R1C40
CURRENT APPLICATION NUMBER: US/10/174,572
CURRENT FILING DATE: 2002-06-18
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ORGANISM: HOMO
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                                          LRRKSPASGQGPMCNVKAPLGSPSPRPRRAKRFASLSRFVETLVVADDKMAAFHGAGLKR 240
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            YLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN
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YLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRGLN
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Watanabe, Colin K
Wood, William I.
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Godowski, Paul J.
Gurney, Austin L.
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o. US20030027263A1
                                                                                                                                                                                                                                     Conservative
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Pred. No. 5.6e-178;
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NUMBER OF SEQ III
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
ORGANISM: Homo
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddowski, Paul
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: p3430R1C31
CURRENT APPLICATION NUMBER: US/10/174,579
CURRENT FILING DATE: 2002-06-18
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NUMBER OF SEQ ID NOS: 612
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CURRENT APPLICATION NUMBER: US/10/174,582
CURRENT FILING DATE: 2002-06-18
PELOT APPLICATION removed - See File Wrapper
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 352
LENGTH: 837
TYPE: PRT
ORGANISM: Homo Sapien
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APPLICANT:
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C36
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Watanabe, Colin K.
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Search completed: April 21,

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Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashiyaki,Y.
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Yamanaka,I., Kiyosawa,H., Kondo,S., Saito,T., Shinagawa,A., Aizawa,K., Fukuda,S., Hara,A., Itoh,M., Kawai,J., Shibata,K., Arakawa,T., Ishii,Y. and Hayashizaki,Y.
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URL:http://genome.gsc.riken.go.jp/
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                                                                                                                                                                                                                                                                                                                                                                                                                                  FLC I. -Retina RNA was provided by Stefano Gustincich, Department of Neurobiology, Harvard Medical School, 220 Longwood Ave., Boston, MA02115, USA, whose assistance we gratefully acknowledge."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5^\prime]
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/tissue_type="retina"
/dev_stage="adult"
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Pred. No. 2.6e-85;
0; Mismatches 49
                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                     49;
                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                   Length 662;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGGATTTATGTGGGCATCATTCATGTGACACCCTGGGAATGGCAGACGTTGGGACCATA 1177
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BB651049 RIKEN full-length enriched, 0 d
musculus cDNA clone C230053J22 5', mRNA
BB651049
                                                                                                                                                             Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., It
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuu
,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Jan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishii, Y., Ito, M., Kawai, J., Konno, H., Kouda, M., Koya, S., Matsuyama, T., Miyazaki, A., Nomura, K., Ohno, M., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagama, A., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T.,
                                                                    sequencing pipeline with 384 multicapillary 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RIKEN Mouse ESTs (Arakawa, T., Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria;
1 (bases 1 to 660)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Muramatsu, M. and Hayashizaki, Y.
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                                                                                                                                                Hayashizaki,Y.
                     Y. and Hayashizaki, Y
                                            Konno, H., Fukunishi, Y.,
                                                                                                                      RIKEN integrated sequence analysis (RISA) system -- 384 - format
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Rodentia;
                                            Shibata, K.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yokohama, Kanagawa 230-0045, Japan
mouse
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i, 0 day neonate
                                               Itoh, M., Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001)
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                                                                                                                                                                                               Tanaka, T., Matsuura
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                                               Sugahara
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                                                                                                                                          GTGGCTCATGAAATTGGGCATCTACTTGGCCTTTCTCATGACGATTCCAAATTCTGTGAA 361
                                                                                                                                                                                                                                                                TGTTCTCCAGAGCGCAGCTGTGCTGTGATTGAAGACGATGGCCTCCACGCAGCCTTCACT 1237
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GCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATCACAGAATTCCTGGATGATGGC 1417
                                             GAGAACTTCGGTACTACAGAAGACAAGCGTTTAATGTCTTCAATCCTTACCAGCATCGAT 421
                                                                                             GAGACCTTTGGTTCCACAGAAGATAAGCGCTTAATGTCTTCCATCCTTACCAGCATTGAT 135
                                                                                                                                                                                          GTGGCTCACGAAATCGGACATTTACTTGGCCTCTCCCATGACGATTCCAAATTCTGTGAA 1297
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences. Mamm. Genome. 12, 673-677 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           encyclopedia: real-time sequence clustering nonredundant cDNA library. Genome Res. 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
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K., Fukuda,S., Hara,A., Itoh,M., Kawai,J., Shibata,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e mouse tissues.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5', GAGAGAGAGAGCTCTTTTTTTTTTTTTTTYN 3'], cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-"Site_1: Sal1; Site_2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified pBluescript KS(+) after bulk excision FLC I. ^{"}
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="0 day neonate"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cerebellum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="cerebellum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="RIKEN full-length enriched, 0 day neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="C230053J22"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
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Pred. No. 5.7e-85;
0; Mismatches 50;
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511 AAAGCCACTGCGCGCGGACCCTGGGCGGAAGAAAAGGGGCGCGCGTGTACCGGGGATGG 570

AAAGCCACTCCTGCGTGGGTCCTGGGCAGAGTATGAA-----CGAATTTATGGGGATGG 56

Matches 506;

Similarity

Conservative

Mismatches

101;

Indels

6

Gaps

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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 314 400 10.00 Email: mouseest@vatson.wustl.edu

Email: mouseest@vatson.wustl.edu

This clone is available royalty-free through LLNL ; contact the

This clone is available royalty-free through LLNL ; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
Contact: Marra M/WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.
The WashU-NCI Mouse EST Project 1999
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4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
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                                                                                           constructed by Dr. Sumio Sugano (University of Tokyo Institute of Medical Science). Custom primers for sequencing: 5' end primer CTTCTGCTCTAAAAGCTGCG and 3' end primer CGACCTGCAGCTCGAGCACA."

a 182 c 183 g 115 t
                                                                                                                                                                                                         /note="Organ: kidney; Vector: pME18S-FL3; Site_1: DraIII (CACTGTGTG); Site_2: DraIII (CACCATGTG); 1st strand cDNA was primed with an oligo(dT) primer [ATGTGGCCTTTTTTTTTTTTTTTTT]; double-stranded cDNA was ligated to a DraIII adaptor [TGTTGGCCTACTGG], digested and cloned into distinct DraIII sites of the pME18S-FL3 vector (5' site CACTGTGTG, 3' site CACCATGTG). XhoI should be used to isolate the cDNA insert. Size selection was performed to exclude fragments <1.5kb. Library
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/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_stage="adult"
/lab_host="DH10B"
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Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL:
IMAGE Consortium (info@image.linl.gov) for further i
MGI:344163
                                                                                   Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. L
                                                                                                                                                                                             Mbmmalis; Eutheris; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                          Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                    Contact: Marra M/Mouse EST Project
                                                                                                                                                    Unpublished (1996)
                                                                                                                                                                    The WashU-HHMI Mouse
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UI-M-BH1-akz-e-06-0-UI 5', mRNA sequence.
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Mus musculus
Eukaryota; Metazoa; Chordata;
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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/clone="IMAGE:569515"
/clone=lib="Life Tech mouse en
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/clone_stage="8".gebryo"
/dev_stage="8".5dpc embryos"
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135 c 130 g 140 t
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No. 6.4e-81;
                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bonaldo, \textit{M.F., Lennon, G. and Soares, M.B.} \\ Normalization and subtraction: two approaches to facilitate generation and subtractions are subtractions. \\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          availability will be considered under appropriate and limited
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institute of Mental Health
6001 Executive Blvd. Room 7N-7190, MSC 9643, Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           regions of the mouse brain (cerebellum, brain stems, olfactory bulbs, hypothalamus, cortex, amygdala, basal ganglia, pineal gland, striatum, hipoccampus). The driver used for subtraction consisted of a pool of 5,000 clones from the NIH_BMAP_M_SI library and a pool of 2,000 clones obtained from non-normalized and normalized mouse brain spinal cord libraries."
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/Clone_lib="NIH_BMAP_M_S2"

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/dev_stage="27-32 days"

/lab_host="DH1OB (Life Technologies)"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Kondo,S., Shinagawa,A., Salto,T., Kiyosawa,H., Yamanaka,I., Aizawa,K., Fukuda,S., Hara,A., Itoh,M., Kawai,J., Shibata,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., I
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.,
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsu
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Tel: 81-45-503-9222
Fax: 81-45-503-9216
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Sciences Center(GSC), Yokohama IIIstruto
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-
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Unpublished (2001)
On Jun 30, 2000 this sequence
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Hiramoto,K., Hori,F., Ishii,Y., Ito,M., Kawai,J., Konno,H., Kouda
,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K., Ohno,M.,
Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki
D., Shibata,K., Shinagawa,A., Takahashi,T., Tayawa,A., 
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                                                                                                                                          cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome 10 (11), 1757-1771 (2000)
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                                                                                                                                                                                                                                                                                                                        Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001) Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shibata, K., Itoh, M., Carninci, P.,
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                                                                                                   Research
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                                                                                              contributed
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                            AI553108 589 bp mRNA linear EST 23-N V102C04.y1 Barstead mouse myotubes MPLRB5 Mus musculus CDNA IMAGE:902598 5' similar to TR:P97857 P97857 A DISINTEGRIN AN METALLOPROTEASE WITH THROMBOSPONDIN MOTIFS ;, mRNA sequence-
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/clone="A530059019"
/clone_11b="RIKEN full-length enriched,
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303 GCAGGTTCCTCTTGGACCTGGAGCGAGATGGTTCGGTGGGCATTGCTG----GCTTCGTGC 359
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                                                                                                                                                                                   CAGTGGACGGTAGTCCCCGCTCTCTCGGCTGTCTTTGACCTCTGTGGGGGGTCTCGACGGCT 479
                                                 GGAGGTTCCTGCTGGACCTGGAGAGAGAGATGACACAGTGGGTGCTGCTGGTAGCATCGTTA 530
AGGAAGAAAAGGGGCGCGTGTACGGGGATGGGTCCGCACGGATCCTGCACGTCTACACCC
                                                                                                                                                             CCGTGGACGGCAGCCCTCGATCCCTAGCTGTTTTGACCTCTGCGGGGGGTCTCGATGGCT
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This clone is available royalty-free through LLNL; contac
IMAGE Consortium (info@image.llnl.gov) for further informa
MGI:523262
This read is a RESEQUENCE of a previously sequenced mouse
This read has been verified (found to hit its original sel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylle,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.
The WashU-NCI Mouse EST Project 1999
Unpublished (1999)
Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 476.
Location/Qualifiers
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Fax: 314 286 1810
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3']; double-stranded cDNA was ligated to Eco RI adaptors [AATTCGGATCCTTG], digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library constructed by Bob Barstead. The C2C12 cell line (available from ATCC, catalog # CRL-1772) differentiates rapidly, forming contractile myctubes and producing characteristic muscle proteins.
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polylinker; Site_1: EcoRI; Site_2: NotI; 1st strand c
was primed with a Not I - oligo(dT) primer (5'
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/cell line="C2C12"
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                                                                                                                                                                  Email: genome-resegsc.riken.go.jp,
URL.http://genome-gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japrel: 81-45-503-9222
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2001)
On Jul 1, 2000 this sequence version replaced gi:8893976
Contact: Yoshihide Hayashizaki
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Arakawa, T., Carninci, P., Fukuda, S.,
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                                                                     sequencing pipeline with 384 multicapillary 10 (11), 1757-1771 (2000) Konno, H., Fukunishi, Y., Shibata, K., Itoh, M.
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RIKEN Mouse ESTs (Arakawa,T., et al. 2001)
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                            Computer-based methods for the mouse full-length cDNA
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  real-time sequence
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  clustering
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                                                                             AGCGCTTAATGTCTTCCATCCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCA 1382
                                                                                                                                                  CCCGACCCTCAAAAACTTTTGCAAATGCAGCCCCAACATAACCGGTAGG--GGATATCCCG 76
                                                AGCGTTTAATGTCTTCAATCCTTACCAGCATCGATGCATCCAAGCCCTGGTCCAAATGCA
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Gaps

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375

21.1%; 86.1%;

Score 320.2; DB 1 Pred. No. 1.9e-58;

DB 10; 58;

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CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Genomic Sciences Center and Genome Science Laboratory in RIKE Division of Experimental Animal Research in Riken contributed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mapping of 19032 mouse cDNAs on mouse chromosomes. J. Func. Genomics 2 pre, L72-L86 (2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nonredundant cDNA library. Genome Res. 11 (2), 281-289 (200 Yamanaka, I., Kiyosawa, H., Kondo, S., Saito, T., Shinagawa, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Please visit our web site (http://genome.gsc.riken.go.jp/)
further details.
     160
                                                                     /note-"Site_1: Sall; Site_2: BamHI; cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                            contributed to prepare mouse tissues. 1st strand cDNA was primed with a primer [5' GAGAGAGAGGATCCAAGAGCTCTTTTTTTTTTTTTTTTVN 3'], cDNA was
                                      modified pBluescript KS(+) after bulk excision FTC T "
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/db_xref="taxon:10090"
/clone="A530092A04"
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   407 CATCCTCTGGCCACCGGGTCACTGTTTCTACAGAGGCACCGTGGACGGCAGCCCTCGAT
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                                                                                          324 AGCGAGATGGTTCGGTGGGCATTGCTG----GCTTCGTGCCCGCAGGAGGCGGGACGAGTG 380
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                                       381 CGCCCTGGCGCCACCGGAGCCACTGCTTCTATCGGGGCACAGTGGACGGTAGTCCCCCGCT 440
                                                                       AGAGAGATGACACAGTGGGTGTTGCTGGTAGAATCGTTACTGCAGGAGGAGGGCTGAGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6001 Executive Blvd. Room 20892-9643, USA Tel: 301 443 1706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE863546 ARNA linear EUI-M-BHO-akh-c-12-0-UI.rl NIH BMAP_M_SI Mus musculus UI-M-BHO-akh-c-12-0-UI 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq primer: M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 301 443 1706 Fax: 301 443 9890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institute of Mental Health 6001 Executive Blvd. Room 7N-7190, MSC 9643,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 467)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
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/dev_stage="27-32 days"
/lab_host="DH10B (Life Technologies)"
/note="vector: pf773D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; The NIH_BMAP_M_S1 library is a subtracted library derived fro a mixture of normalized libraries from ten regions of the mouse brain (cerebellum, brain stems, olfactory bulbs, hypothalamus, cortex, amygdala, basal gangila, pineal gland, striatum, hipoccampus). The driver used for subtraction consisted of a pool of 20,000 cDNA clones obtained from non-normalized and normalized libraries of these ten regions of the mouse brain."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mEST@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
/strain="C57BL/6J"
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AL552429
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BP 191 91006 EVRY cedex · France
Email: segrefégenoscope.cns.fr, Web : www
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Genoscope
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Li,W.B., Gruber,C.,
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                                                                                                    D
                                                                                                                                                     /clone="CSODIO707J19"
/clone=lib="LTI_NFL006_PL2"
/clone=lib="LTI_NFL006_PL2"
/clone=lib="LTI_NFL006_PL2"
/clone=lib="LTI_NFL006_PL2"
/tissue_type="placenta"
/tissue_type="placenta"
/note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
was primed with a NotI oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact: Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
Rockville, Maryland 20850, USA Fax: (1) 301 610 8371
                                                                                                    http://fulllength.invitrogen.com"
1 337 c 274 g 205 t
                                                                                                                                       Email : fliang@lifetech.com URL :
                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
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Score 265.2; DB 9;
Pred. No. 1.3e-46;
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NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
Tissue Procurement: Jeffrey Green M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Baylor College of Medicine Human Genom
Sequencing Center
Center code: BCM-HGSC
                                                                                                                                                                                      Clone distribution: MGC clone distribution through the I.M.A.G.E. Consortium/LLNL at: Series: IRAK Plate: 9 Row: b Column: 7 This clone has the following problem: frame Location/Qualifiers
                                                                                                                                                                                                                                                                                         Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunaratne, P.H., García, A.M., Lu, X., Huly
Yoon, V.S., Kowis, C.R., Lawrence, S., Mart
Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (20-FEB-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BC003269 2931 bp mRNA linear HTC 07-AM Mus musculus, Similar to a disintegrin-like and metalloprotea (reprolysin type) with thrombospondin type 1 motif, 1, clone
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Mammalia; Eutheria; Rodentia;
1 (bases 1 to 2931)
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BC003269.1 GI:14707747
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMAGE: 3499206,
     708
/tissue_type="Mammary tumor. C3(1)-Tag model. ductal carcinoma. 5 month old virgin mouse." /clone_lib="NCI_CGAP_Mam6" /lab_host="NHIOB" /note="Vector: pCMV-SPORT6" a 812 c 811 g 600 t
                                                                                                         /clone="IMAGE:3499206"
                                                                                                                       /map-"FVB/N"
                                                                                                                                       /organism="Mus musculus"
/db_xref="taxon:10090"
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                                                                                                                                                       CCACGCAGCCTTCACTGTGGCTCACGAAATCGGACATTTACTTGGCCTCTCCCCATGACGA
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                                CCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATCACAGA
                                                                                                                                                                                                       AGACGTTGGGACCATATGTTCTCCAGAGCGCAGCTGTGCTGTGATTGAAGACGATGGCCT
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   GCTCTCCAGCTTAGACCATAGCCAGCCCTGGTCACCTTGCAGTGCCTACATGGTCACGTC
                                                                                       TTCCAAATTCTGTGAAGAGACCTTTGGTTCCACAGAAGATAAGCGCTTAATGTCTTCCAT
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                                                                   TGCTAAGCACTGTGCCAGCTTGAATGGTGTGACTGGCGATTCTCATCTGATGGCCTCGAT
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No. 2e-45;
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AUTHORS
TITLE
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VERSION
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  192 GCCACCCGCACCCCTGGCGCAGCGGCGCAGGAGCAAGGGGCTGGTGCAGAACATCGACC
                                                              132 CAGCCGCCCAGCCCGCCGGCGGCAGGGGGAGGAGGTGCAGGAGCCGAGCCTCCCG 191
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                                          CGGCCGCCGAGCCGGACCAGCCGCAGGGGAAGGAAACACGGGAGCGA----
                                                                                                                                  361;
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Seq primer:
POLYA-No.
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UI-M-BHO-akh-c-12-0-UI.sl NIH_BMAP_M_Sl Mus
UI-M-BHO-akh-c-12-0-UI 3', mRNA sequence.
AI851347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: mESTemail.nlh.gov
Oligo-dT track not found, Not I site shown in beginning of sequence
is likely internal to the message. cDNA Library Preparation: M.B.
Soares Lab Clone distribution: NIH BMAP cDNA clones will be made
available by the means that is soon to be determined. When NIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 301 443 1706
Fax: 301 443 9890
Email: mEST@mail.r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          National Institute of Mental Health 6001 Executive Blvd. Room 7N-7190, MSC 9643, Bethesda, 20892-9643, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome Res. 6 (9), 791-806 (1996) 97044477
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EST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               discovery
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 457)
Bonaldo,M.F., Lennon,G. and Soares,M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Chin, H
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                                                                                                                                Conservative
                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
/organism="Mus musculus"
/strain="C57BL/60"
/db_xref="taxon:10090"
/clone_lib="NIH_BMAP_M_S1"
/clone_lib="NIH_BMAP_M_S1"
/dev_stage="27-32 days"
/lab_host="9H108 (Life Technologies)"
/note="Vector: pT7T3D-Pac (pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; The NIH_BMAP_M_S1 library is a subtracted library derived from a mixture of normalized libraries from ten regions of the mouse brain (cerebellum, brain stems, olfactory bulbs, hypothalamus, cortex, amyddala, basal ganglla, plneal gland, striatum, hipoccampus). The driver used for subtraction consisted of a pool of 20,000 cDNA clones of the striatum of from normalized libraries of the subtraction consisted of an and normalized libraries of
                                                                                                                                                                                                                                     TAG_LIB-NIH_BMAP_M_S1
TAG_TISSUE-prefrontal-cortex
TAG_SEQ-GCTCA"
TAG_SEQ-GCTCA"
129 c 152 g 89 t
                                                                                                                                                                                                                                                                                                                        obtained from non-normalized and normalized libraries these ten regions of the mouse brain.
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                                                                                                                                                                                                                                                                                                                                                                                          Contact: Stephen L. Johnson
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clark, M., Johnson, S.L., Lehrach, H., Lee, R., Li, F., Marra, M., Eddy, S., Hillier, L.; Kucaba, T., Martin, J., Beck, C., Wylie, T., Underwo, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, Ritter, E., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, Ritter, E.,
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                                                                                                                                                                                                                              address: http://www.researchgenetics.com/
Seq primer: T7 ET from Amersham
                                                                                                                                                                                                                                                                     cDNA Library Preparation: Ning Wu. cDNA Library Arrayed by: Research Genetics. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: Research Genetics web
                                                                                                                                                                                                                                                                                                                                                         Tel: 314 286 1800
Fax: 314 286 1810
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Unpublished (1998)
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Location/Qualifiers
                                             DH10B)"
                                                        /clone_lib="Zebrafish Research Genetics C32 fin"
/tlssue_type="Fin"
/lab_host="GeneHogs (HS996, a phage-resistant isolate
                                                                                                                         /organism="Danio rerio"
/db_xref="taxon:7955"
/note="Vector: pT7T3D-Pac with a modified polylinker;
Site_1: EcoRI; Site_2: NotI; 1st strand cDNA was prep
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UI-M-BH1-akz-e-06-0-UI.sl NIH_BMAP_M_S2 Mus musculus cDNA clone
UI-M-BH1-akz-e-06-0-UI 3', mRNA sequence.
                                           20892-9643, USA
Tel: 301 443 1706
Fax: 301 443 9890
                                                                                                        National Institute of Mental Health 6001 Executive Blvd. Room 7N-7190,
                                                                                                                                                  Contact: Chin, H
                                                                                                                                                                        97044477
                                                                                                                                                                                                               discovery
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Bonaldo, M.F., Lennon, G. and Soares, M.B.
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                         Mus musculus
                     Email: mEST@mail.nih.gov
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72.6%;
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Pred. No. 3.6e-44;
an oligo-dT
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SOURCE KEYWORDS VERSION ACCESSION

EST

house mouse AI429523.1 AI429523 DEFINITION

AI429523 337 bp mRNA linear mp17f10.x1 Life Tech mouse embryo 8 5dpc 10664019 clone IMAGE:569515 3' similar to TR:015204 015204

Mus

EST 09-MAR-1999

DISINTEGRIN-PROTEASE. ;, mRNA sequence

GI:4275449

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RESULT 15
AI429523
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1235 ACTGTGGCTCACGAAATCGGACATTTACTTGGCCTCTCCCATGACGATTCCAAATTCTGT 1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1175 ATATGTTCTCCAGAGCGCAGCTGTGCTGTGATTGAAGACGATGGCCTCCACGCAGCCTTC 1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                    1295 GAAGAGACCTTTGGTTCCACAGAAGATAAGCGCTTAATGTCTTCCATCCTTACCAGCATT 1354
                                                                                                                                                                                                                                                                                                                                                                       402 GAAGAGAACTTCGGTACTACAGAAGACAAGCGTTTAATGTCTTCAATCCTTACCAGCATC
                                                                                                                         282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 522 ATATGTTCTCCGGAGCGCAGCTGTGCAGTGATTGAAGATGATGGCCTCCATGCAGCCTTC
                                                                                                                                                                                                                                                                                GATGCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATCACAGAATTCCTGGATGAT 1414
                                                                                                                      GGTCATGGTAATTGTTTGCTAGACCTACCACGGAAGCAGATTTTTGGG
                                                                                                                                                GGCCATGGTAACTGTTTGCTGGACCTACCACGAAAGCAGATCCTGGG 1461
                                                                                                                                                                                                                                                GATGCATCCAAGCCCTGGTCCAAATGCACGTCAGCCACCATCACAGAATTCCTGGATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGTGGCTCATGAAATTGGGCATCTACTTGGCCTTTCTCATGACGATTCCAAATTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. The sequence tag present in the cDNA between the NotI site and the oligo-dT track served to identify it as a clone from the normalized corpus striatum library cDNA Library Preparation: M.B. Soares Lab Clone distribution: NIH BMAP cDNA clones will be made available by the means that is soon to be determined. When NIH determines the means for distribution of the BMAP cDNA clones, the record will be updated accordingly when that means is determined.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /lab_host="ph10B (Life Technologies)"
/note="Vector: pT/T3D-Pac (Pharmacia) with a modified
/note="Vector: pT/T3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The
NIH_BMAP_M_S2 library is a subtracted library derived from turn is a subtracted library
derived from a mixture of normalized libraries from ten
regions of the mouse brain (cerebellum, brain stems,
olfactory bulbs, hypothalamus, cortex, amygdala, basal
ganglia, pineal gland, striatum, hipoccampus). The driver
used for subtraction consisted of a pool of 5,000 clones
from the NIH_BMAP_M_S1 library and a pool of 2,000 clones
betained from non-pormalized and pool of 2,000 clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAG_TISSUE=corpus-striatum
TAG_SEQ=ACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:10090"
/clone="UI-M-BHI-akz-e-06-0-UI"
/clone_lib="NIH BMAP_M_S2"
/dev_stage="27-32 days"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         spinal cord libraries:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      obtained from non-normalized and normalized mouse brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAG_LIB-NIH_BMAP_M_S2
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90.9%;
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Pred. No. 1.9e-42;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26;
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AUTHORS
Search completed: April 26, Job time: 4653.37 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 266; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                              488
                                                                                                                                                                                                                                                         185 GGAGGGCTGAGCGCATCCTCTGGCCACCGGGGTCACTGTTTCTACAGAGGCACCGTGGAC
                                                                                                                                                                                                                                                                                                                                             125
                                                                                                                                                                                                                                                                                                                                                                 311 CTCTTGGACCTGGAGCGAGATGGTTCGGTGGGCATTGCTG----GCTTCGTGCCCGCAGGA 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191 GCCCACCCCGCACCCCTGGCGCAGGGGCCAGGAGCAAGGGGCCTGGTGCAGAACATCGAC 250
                                                                                    305
                                                                                                                                                                         245
                                                                                                                                                                                                                 428
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                GTCAAGCACGCGCGCTACACCCTAAAGCCACT 519
                                                                                                                                                                      GGCAGCCCTCGATCCCTAGCTGTCTTTGACCTCTGCGGGGGTCTCGATGGCTTCTTTGCA
                                                                                                                                                                                          GGTAGTCCCCCGCTCTCTGGCTGTCTTTGACCTCTGTGGGGGGTCTCGACGGCTTCTTCGCG 487
                                                                                                                                                                                                                                                                                                 GGCGGGACGAGTGCGCCCTGGCGCCACCGGAGCCACTGCTTCTATCGGGGCCACAGTGGAC 427
                                                                                                                                                                                                                                                                                                                                           CTGCTGGACCTGGAGAGAGAGACACAGTGGGTGCTGCTGGTAGCATCGTTACTGCAGGA 184
                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCATTTACAACCCTTGGCCGGGCAGCGCAGGAGCGGCGGGCTGGTCCAGAATATAGAC 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
This clone was previously sequenced on the 5' end only, this new
data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Possible reversed clone: similarity on wrong strand Possible reversed clone: polyT not found High quality sequence stop: 304.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marra,M., Hilller,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R., and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Marra M/WashU·NCI Mouse EST Project 1999
Washington University School of Medicine ·
4444 Forest Park Parkway, Box 8501, St. Louis, MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
Eukaryota; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mmalia; Eutheria; (bases 1 to 337)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14.2%;
ilarity 80.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/strain="C57BL/60"
/db_xref="taxon:10090"
/clone="IMAGE:569515"
/clone="IMAGE:569515"
/clone_lib="Life Tech mouse embryo 8 5dpc 10664019"
/tissue_type="embryo"
/dev_stage="8.5dpc embryos"
/dev_stage="8.5dpc embryos"
/lab_host="DH108"
/note="Organ: whole embryo; Vector: pCMV-SPORT2; Site_1:
Sali; Site_2: Not1; Cloned unidirectionally. Primer:
01igo dT. 8.5dpc embryos. pCMV-SPORT2 vector."
61 a 95 c 110 g 71 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Metazoa;
                      2003, 04:36:07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 215.2; DB 9;
Pred. No. 5.1e-36;
0; Mismatches 63;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Louis, MO 63108, 'USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 337;
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Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq.length: 0, Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
Published_Applications_NA:*

1: /cgn2_6/ptodata/2/pubpna/USO7_PUBCOMB.seq:*

2: /cgn2_6/ptodata/2/pubpna/USO6_NEW_PUB.seq:*

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6: /cgn2_6/ptodata/2/pubpna/USO8_NEW_PUB.seq:*

7: /cgn2_6/ptodata/2/pubpna/USO8_NEW_PUB.seq:*

9: /cgn2_6/ptodata/2/pubpna/USO9_NEW_PUB.seq:*

9: /cgn2_6/ptodata/2/pubpna/USO9_NEW_PUB.seq:*

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14: /cgn2_6/ptodata/2/pubpna/USO9_NEW_PUB.seq:*
            US-10-050-200-2
1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            April 26, 2003, 05:36:43; Search time 311.637 Seconds (without alignments) 5293.350 Million cell updates/sec
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Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 gtcgacgcagcgcactatgc.....agcttgtcgagaagtactag 1516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1419640
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	19	18	17	16	15	14	13	12	11	10	9	80	7	6	ر د	4	w	N	_	Result No.
	174.2	179.6	180.6	190.6	205	210.2	237	253	253	253	256.8	256.8	256.8	257.8	257.8	257.8	257.8	267	1010.6	Score
	11.5	11.8	11.9	12.6	13.5	13.9	15.6	16.7	16.7	16.7	16.9	16.9	16.9	17.0	17.0	17.0	17.0	17.6	66.7	Query Match
	4407	2520	1104	3147	739	1520	3638	2184	2184	2184	2184	2184	2184	3446	2940	2853	2469	4676	3002	Length
	9	9	10	10	10	10	10	10	9	9	10	ø	9	10	9	10	9	12	10	BG.
•	US-10-174-590-351	us-09-912-788-1	US-09-965-631-5	US-09-803-589-1	US-09-918-171A-10	US-09-918-171A-3	US-09-918-171A-8	US-09-445-023A-2	US-10-097-580-2	US-10-097-597-2	US-09-445-023A-13	US-10-097-580-13	US-10-097-597-13	US-09-965-631-7	US-10-163-316-1	US-09-965-631-3	US-10-163-316-3	US-10-105-929-1	US-09-918-171A-1	ID
	351	Sequence 1, Appli	Sequence 5, Appli	Sequence 1, Appli	10,	ω	Sequence 8, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 13, Appl	Sequence 13, Appl	Sequence 13, Appl	Sequence 7, Appli	Sequence 1, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 1, Appli	Sequence 1, Appli	Description

174.2 11.5 4407 9 US-10-175-737-351 174.2 11.5 4407 9 US-10-175-736-351 174.2 11.5 4407 9 US-10-175-738-351 174.2 11.5 4407 9 US-10-175-738-351 174.2 11.5 4407 9 US-10-176-482-351 174.2 11.5 4407 9 US-10-176-913-351 174.2 11.5 4407 9 US-10-180-552-351 174.2 11.5 4407 9 US-10-178-79-351 174.2 11.5 4407 9 US-10-173-700-351 174.2 11.5 4407 9 US-10-174-572-351 174.2 11.5 4407 9 US-10-174-588-351 174.2 11.5 4407 9 US-10-174-588-351 174.2 11.5 4407 9 US-10-175-739-351 174.2 11.5 4407 9 US-10-175-739-351 174.2 11.5 4407 9 US-10-175-743-351 174.2 11.5 4407 9 US-10-176-488-351 174.2 11.5 4407 9 US-10-176-488-351 174.2 11.5 4407 9 US-10-176-93-351 174.2 11.5 4407 9 US-10-176-987-351 174.2 11.5 4407 9 US-10-176-987-351 174.2 11.5 4407 9 US-10-176-991-351 174.2 11.5 4407 9 US-10-176-991-351 174.2 11.5 4407 9 US-10-176-991-351	45	44	43	42	41	40	39	38	37	36	ω	34	S S	32	31	30	29	28	27	26	25	24	23	22	21	
5 4407 9 US-10-17; 5 4407 9 US-10-18; 6 4407 9 US-10-18; 6 4407 9 US-10-17; 7 4407 9 US-10-17; 7 4407 9 US-10-17; 8 4407 9 US-10-17; 9 4407 9 US-1																										
9 US-10-17-19-19-19-19-19-19-19-19-19-19-19-19-19-																										
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ALIGNMENTS

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Qy 172 GGAGCGAGCCGAGCCTCCCGGCCACCCGCACCCCTGGCGCAGCGGCGCAGGAGCAAGGG 231	Qy 112 GCAGCCTCCGACTGCTGCAGCAGCCGCCGAGCCGCCGGCGGCGGCAGGGGGAGGAG	QY 52 GTTCCGCCTGCCCCTGGCCGCGGGTCGGCCGCGGGACACCTGCCCAGGATAAAGCCGG 111	QY 7 GCAGCGCACTATGCTGCTCGGGTGGGCGTCCCTGCTGCTGTGCGC 51	Query Match 66.7%; Score 1010.6; DB 10; Length 3002; Best Local Similarity 82.7%; Pred. No. 1.9e-276; Matches 1218; Conservative 0; Mismatches 219; Indels 36; Gaps	WESULT 1 US-09-918-171A-1 Sequence 1, Application US/09918171A Patent No. US20020110894A1 PATENT INFORMATION: APPLICANT: Hurskainen, Tiina L. APPLICANT: Hurskainen, Tiina L. APPLICANT: Hirohata, Satoshi TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases FILE REFERENCE: 26473/04193 CURRENT PAPLICATION NUMBER: US/09/918,171A CURRENT FILING DATE: 2001-07-30 PRIOR APPLICATION NUMBER: 09/369,364 PRIOR FILING DATE: 1999-08-06 NUMBER OF SEQ ID NOS: 31 SEO ID NO 1 LENGTH: 3002 TYPE: DNA ORGANISM: mus musculus ADAMTS-5 FEATURE: NAMES/KEY: CDS LOCATION: (18)(2810) US-09-918-171A-1

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GENERAL INFORMATION:

APPLICANT: HOILEMAN, Douglas A.

APPLICANT: GOODEREI, Andrew D.J.

TITLE OF INVENTION: TANGO-71, TANGO-73, TANGO-74, TANGO-71

FILE REFERENCE: 09404/041001

CURRENT APPLICATION NUMBER: US/10/105,929

CURRENT FILING DATE: 2002-03-25

PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09, PRIOR FILING DATE: EARLIER FILING DATE: 1998-08-07

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LOCATION: (46
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Pred. No. 1.1e-65;
0; Mismatches 505;
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RESULT 3
US-10-163-316-3
US-10-163-316-3
Sequence 3, Application US/10163316
Publication No. US20020197703A1
GENERAL INFORMATION:
APPLICANT: Kapeller-Libermann, Rosana
FITTLE OF INVENTION: 65552, A Human Matrix Metalloproteinase and Interest of INVENTION: Therefor
FILE REFERENCE: MPIOI-025PLRMM
CURRENT APPLICATION NUMBER: US/10/163,316
CURRENT FILING DATE: 2002-06-05
CURRENT FILING DATE: 2002-06-05
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                                                     SOFTWARE: FastSEQ for Windows
SEQ ID NO 3
LENGTH: 2469
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                           PRIOR APPLICATION NUMBER: 60/297,863
PRIOR FILING DATE: 2001-06-13
NUMBER OF SEQ ID NOS: 10
FEATURE:
NAME/KEY: CDS
LOCATION: (1)...(2469)
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Sequence 3, Application US/09965631
Patent No. US20020115842A1
GENERAL INFORMATION:
APPLICANT: Friddle, Carl Johan
APPLICANT: Hilbun, Erin
TITLE OF INVENTION: No. US20020115842A1el Human Pro
FILE REFERENCE: LEX-0241-USA
CURRENT APPLICATION NUMBER: US/09/965,631
CURRENT FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: US 60/236,689
PRIOR APPLICATION NUMBER: US 60/236,689
PRIOR FILING DATE: 2000-09-29
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NUMBER OF SEQ ID NOS: 7
SOFTWARE: FRSTSEQ for Windows
SEQ ID NO 3
LENGTH: 2853
TYPE: DNA
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Best Local Similarity
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                                                     Version
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Pred. No. 3.7e-63;
0; Mismatches 262
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                                                                                                                                                                                   Sequence 1, Application US/10163316 Publication No. US20020197703A1 GENERAL INFORMATION:
             SEQ
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Best Local Similarity
                                          APPLICANT: Kapeller-Libermann, Rosana
TITLE OF INVENTION: 65552, A Human Matrix Metalloproteinase
TITLE OF INVENTION: Therefor
FILE REFERENCE: MPIO1-02591RNM
CURRENT APPLICATION NUMBER: US/10/163,316
CURRENT FILING DATE: 2002-06-05
PRIOR APPLICATION NUMBER: 60/297,863
PRIOR APPLICATION NUMBER: 60/297,863
PRIOR FILING DATE: 2001-06-13
NUMBER OF SEO ID NOS: 10
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                            SOFTWARE: FastSEQ for Windows Version
LENGTH: 2940
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RESULT 6
US-09-965-631-7
IS-09-965-631-7
Sequence 7, Application US/09965631
Patent No. US20020115842A1
GENERAL INFORMATION:
APPLICANT: Friddle, Carl Johan
APPLICANT: Hilbun, Erin
TITLE OF INVENTION: No. US2002011584
FILE REFERENCE: LEX-0241-USA
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; LOCATION: (1)...(2940)
; OTHER INFORMATION: n = A,T,C
US-10-163-316-1
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Pred. No. 3.9e-63;
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ION: No. US20020115842A1el Human LEX-0241-USA

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RESULT 7
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                                              Sequence 13, Application US/10097597 Publication No. US20030022352A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
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ORGANISM: homo sapiens
-09-965-631-7
APPLICANT: Hirose, Kunitaka
APPLICANT: Inoguchi, Eiji
APPLICANT: Hakozaki, Michir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 2000-09-29 NUMBER OF SEQ ID NOS: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/965,631
CURRENT FILING DATE: 2001-09-27
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LENGTH: 2184
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CURRENT FILING DATE: 2002-03-15
PRIOR APPLICATION NUMBER: 09/445,023
PRIOR FILING DATE: 1999-12-03
PRIOR APPLICATION NUMBER: JP 9-180422
PRIOR APPLICATION NUMBER: JP 9-180422
PRIOR FILING DATE: 1997-06-03
NUMBER OF SED ID NOS: 14
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TYPE: DNA
ORGANISM: Mus :
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                      ACAGAATTCCTGGATGATGGCCATGGTAACTGTTTGCTGGACCTACCACGAAAGCAGATC
                                                                                              TCCATCCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATC 1396
                                                                                                                                                     GATGATGCTAAGCACTGTGCCAGCTTGAATGGTGTGAGTGGCGATTCTCATCTGATGGCC
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APPLICANT: Kuno, Kouji
TITLE OF INVENTION: Human ADAMTS-1 protein, generate of INVENTION: composition and method of FILE REFERENCE: 057092
CURRENT APPLICATION NUMBER: US/10/097,580
CURRENT FILING DATE: 2002-03-15
PRIOR APPLICATION NUMBER: 09/445,023
PRIOR APPLICATION NUMBER: 09/445,023
PRIOR FILING DATE: 1999-12-03
PRIOR FILING DATE: 1999-06-03
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin version 3.0
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Best Local Similarity
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APPLICANT: Inoguchi, Eiji
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TYPE: DNA
ORGANISM: Mus
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LOCATION: (1)..(2184)
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GATGATGCTAAGCACTGTGCCAGCTTGAATGGTGTGAGTGGCGATTCTCATCTGATGGCC
                                   GACGATTCCAAATTCTGTGAAGAGACCTTTGGTTCCACAGAAGATAAGCGCTTAATGTCT 1336
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                                                                         GGTTTGCAAGCTGCCTTCACCACAGCCCATGAATTGGGCCATGTGTTTAACATGCCGCAC
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Ishida, Yukako
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; LOCATION: (1)..(2184)
US-09-445-023A-13
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SEQ ID NO 13
LENGTH: 2184
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Best Local Similarity 61.8%;
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Patent No. US20020119167A1
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CURRENT APPLICATION NUMBER: US/09/445,023A
CURRENT FILING DATE: 1999-12-03
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PRIOR FILING DATE: 1997-06-03
NUMBER OF SEQ ID NOS: 14
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APPLICANT: Inoguchi, Eiji
APPLICANT: Hakozaki, Michi
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ORGANISM: Mus sp.
FEATURE:
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                                                                                                                                                                        TCCATCCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCACTTCAGCCACCATC 1396
                                                                                                     ATGGCAGACGTTGGGACCATATGTTCTCCAGAGCGCAGCTGTGCTGTGATTGAAGACGAT 1216
                                                                                                                                                                                                                                                            TTTTGCAAGTGGCAGCACCAACACAACCTGGGAGATGACCATGAGGAGCACTACGAT 1098
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                   GGCCTCCACGCAGCCTTCACTGTGGCTCACGAAATCGGACATTTACTTGGCCTCTCCCAT 1276
                                                                                                                                                  ACTGCAATTCTGTTCACCAGACAGGATTTATGTGGCTCCCACACGTGTGACACTCTCGGA
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Hakozaki, Michinori
Ishioka, Keiko
Ishida, Yukako
Matsushima, Kouji
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Pred. No. 6.9e-63;
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; LOCATION: (1)..(2184)
US-10-097-597-2
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SEQ ID NO 2
LENGTH: 2184
TYPE: DNA
ORGANISM: Homo sapiens
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US-10-097-597-2
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Best Local Similarity
Matches 412; Conserv
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PRIOR FILING DATE: 1999-12-03
PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR FILING DATE: 1997-06-03
NUMBER OF SEQ ID NOS: 14
SOFTWARE: DP+-----
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TITLE OF INVENTION: Human ADAMTS-1 protein, gene encoding the same,
TITLE OF INVENTION: pharmaceutical
TITLE OF INVENTION: composition and method of immunologically anal
FILE REFERENCE: Q57092
CURRENT APPLICATION NUMBER: US/10/097,597
CURRENT FILING DATE: 2002-03-15
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  CCACACTCAAGAACTTTTGCAAGTGGCAGCAGCCAACAACCAGCTGGGAGATGACCATG 108:
                                                                                                                   TGAAGATCTTGGTCATCCACGATGAACAGAAGGGGCCGGAAGTGACCTCCAATGCTGCCC 259
                                                                                                                                                      TGAAGGTGGTGGTGCTAGGCGACAAGGACAAGAGCCTGGAAGTGAGCAAGAACGCTGCCA 1022
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                                      ACCAGTCGATGGCAGAATTCCACGGCAGTGGTCTAAAAGCATTACCTTCTCACGTTGTTTT 139
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Hakozaki, Michinori
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Ishida, Yukako
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                                                                                                                                                                                            Matches
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 2
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CURRENT FILING DATE: 2002-03-15
PRIOR APPLICATION NUMBER: 09/445,023
PRIOR FILING DATE: 1999-12-03
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TYPE: DNA
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                                      ACCAGTCGATGGCAGAATTCCACGGCAGTGGTCTAAAGCATTACCTTCTCACGTTGTTTT
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                                                               ; FEATURE:
; NAME/KEY: exon
; LOCATION: (1)..(2184)
US-09-445-023A-2
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                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Hirose, APPLICANT: Inoguch APPLICANT: Hakozak APPLICANT: Ishioka APPLICANT: Ishida,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/09445023A Patent No. US20020119167A1
                  Best
                                                                                                                                                                            SOFTWARE: PatentIn version 3.0 SEQ ID NO 2
 Best Local
Matches 4
                                 Query Match
                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                        TITLE OF INVENTION: Human ADAMTS-1 protein, TITLE OF INVENTION: composition and method FILE REFERNCE: 057092
CURRENT APPLICATION NUMBER: US/09/445,023A CURRENT FILING DATE: 1999-12-03
PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR APPLICATION NUMBER: JP 9-160422
PRIOR FILING DATE: 1997-06-03
NUMBER OF SEQ ID NOS: 14
                                                                                                                            ORGANISM: Homo
                                                                                                                                            TYPE: DNA
                                                                                                                                                             LENGTH: 2184
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Inoguchi, Eiji
Hakozaki, Michinori
Ishioka, Keiko
Ishida, Yukako
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Score 253; DB 10;
Pred. No. 8.2e-62;
0; Mismatches 265;
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                                                                                                                                                                                                                                                                                    Sequence 8, Application US/09918171A Patent No. US20020110894A1 GENERAL INFORMATION:
                                                               SOFTWARE: PatentIn Ver.
SEQ ID NO 8
LENGTH: 3638
TYPE: DNA
                                                                                                                                                                                                        APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirohata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc
FILE REFERENCE: 26473/04193
                                                                                                                            PRIOR APPLICATION NUMBER: 09/369,364
PRIOR FILING DATE: 1999-08-06
NUMBER OF SEQ ID NOS: 31
                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/918,171A CURRENT FILING DATE: 2001-07-30
                                              ORGANISM: Mus musculus ADAMTS-8
NAME/KEY: CDS
LOCATION: (278)..(2992)
                             FEATURE:
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; LOCATION: (3636) •
; OTHER INFORMATION: n =
US-09-918-171A-8
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                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Apte, Suneel
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirobata, Satoshi
TITLE OF INVENTION: Nucleic Acids Encoding Zinc Metalloproteases
FILE REFERENCE: 26473/04193
                                                                                                                                                                                                                                                           Sequence 3, Application US/09918171A Patent No. US20020110894A1
                                SEQ ID NO 3
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Best Local Similarity
                                                                               CURRENT APPLICATION NUMBER: US/09/918,171A CURRENT FILING DATE: 2001-07-30 PRIOR APPLICATION NUMBER: 09/369,364 PRIOR FILING DATE: 1999-08-06
                                                  SOFTWARE: Patentin
                                                                 NUMBER OF SEQ ID NOS: 31
TYPE: DNA
              LENGTH: 1520
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Pred. No. 3.2e-57;
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NAME/KEY: misc_feature
LOCATION: (1457)
OTHER INFORMATION: n=G
NAME/KEY: misc_feature
LOCATION: (1458)
OTHER INFORMATION: n =T
US-09-918-171A-3
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US-09-918-171A-10
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                                                                                                                              Query Match
Best Local Similarity 60.4
Matches 356; Conservative
                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 10
LENGTH: 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
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APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hirskainen, Tiina L.
APPLICANT: Hurskainen, Tiina L.
APPLICANT: Hurskainen, Tiina L.
CURRENT FILING DATE: 2001-07-30
CURRENT FILING DATE: 2001-07-30
                                                                                                                                                                                                                                                                         LENGTH: 739
TYPE: DNA
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 31
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PRIOR FILING DATE: 1999-08-06
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OTHER INFORMATION: n-A
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OTHER INFORMATION: n=T
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                   CGGTTGTATGGCCGGGGCCTGCAGCATTACCTGCTGACCCTGGCCTCCATCGCCAATAGG
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GCCTTCTACGGGGCCGACCTGCAGAACCACATCCTGACGTTAATGTCTGTGGCAGCCCGA 179
                                                                  CGGTTTGTGTGTGAGGCGCGCTTCGTGGAGACGCTGCTGGTGGCCGATGCGTCCATGGCT 119
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Pred. No. 2.4e-48;
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600 GCACCGCTGTTCGTCCACCTGAACCAGACGCTGCCCCTGGTCCCCCTGCA 648
                                             540 CACGACGACTCCAAGCCCTGCACACGCCTCTTCGGGCCCATGGGCCAAGCACCACGTGATG
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                       TCTTCCATCCTTACCAGCATTGATGCATCTAAGCCCTGGTCCAAATGCA 1382
                                                                                                                                                                                                                                         TTCTGCAACTGGCAGCGGCGTTTCAACCAGCCCAGCGACCGCCACCCAGAGCACTACGAC 359
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Search completed: April 26, 2003, 09:50:41 Job time: 365.637 secs

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Minimum
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

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313.4	332.2	346.2	374	400.6	577.4	Query Score Match
23.1	24.4	25.5	27.5	29.5	42.5	Query Match Length DB
835	700	420	440	681	598	ength
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B1602707	BI691035	AW353152	BF850604	BE912007	BM069515	ID
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BECURAGE I KYAGLU.X AI464076 W74411.Y BB220373 BB220373 BB641727 BB641727 BB655188 BB655188 BB655187 BB6707715 A254_LE A BB611853 BB611853 BB658345 BB658345 BB658345 BB658345 BB658345 BB658345 BB658345 BB658345	BB610011 j49d03.y j49d03.y rc42g01.x j49d03.r UI-M-BH1 UI-S6h09.s	AL603427 DKFZp686G AV617111 AV617111 BB624639 BB624639 BB612585 BB612585 BB651049 BB651049 BB651049 BB651049 BB6472806 BB642806 A1969885 wq76903.x AA2886689 mp17f10.r BF078689 Z29090 MA	AL7/12592 DKFZp686A AW357906 41683 MAR BF853210 MR2-EN009 BM069747 1e88g09.y AW353150 34945 MAR BF446232 7p34c05.x AI400905 th30g08.x AW137467 UI-H-BII-	BF850605 PM1-EN006 BG540485 602569210 BG0303269 Mus muscu BF850549 PM1-EN006 BP353240 PM2-HT092

ALIGNMENTS

TITLE JOURNAL COMMENT RESULT 1 BM069515/c LOCUS ACCESSION VERSION KEYWORDS REFERENCE DEFINITION ORGANISM AUTHORS 598 bp mRNA linear EST 12-MAR-2002 ie88g09.x1 Melton Normalized Human Islet 4 N4-HIS 1 Homo sapiens cDNA clone IMAGE:5674169 3' similar to TR:075173 075173 KIAA0688 PROTEIN. [1];, mRNA sequence.
BM069515
BM069515.1 GI:16909594
EST. Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity &
MA 02138
Tel: 617-495-1812
Fax: 617-495-8557 Melton,D., Brown,J., Kenty,G., Permutt,A., Lee,C., Kaestner,K., Lemishka,I., Scearce,M., Brestelli,J., Gradwohl,G., Clifton,S., Hillier,L., Marra,M., Pape,D., Wylie,T., Martin,J., Blistain,A., Schmitt,A., Thelsing,B., Ritter,E., Ronko,I., Bennett,J., Cardenas,M., Gibbons,M., McCann,R., Cole,R., Tsagareishvili,R., Williams,T. Unpublished (2000)
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue .M., Gibbons,M., McCann,R., Cole,R.,
Jackson,Y. and Bowers,Y.
Endocrine Pancreas Consortium Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 598) Homo sapiens human.

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GAGGATGATGGGCTCCAGTCAGCCTTCACTGCTGCTCATGAACTGGGTCATGTCTTCAAC 1113
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                                                                                             GAGGATGATGGGCTCCAGTCAGCCTTCACTGCTGCTCATGAACTGGGTCATGTCTTCAAC
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Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu) This sequence now available from the IMAGE
consortium, for clone orders contact: info@image.lini.gov
High quality sequence stop: 472.
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/db_xref="taxon:9606"
/clone="IMAGE:5674169"
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/dev_stage="Adult"
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Pred. No. 6.1e-123;
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                1050 TGTGGAGGATGATGGGCTCCAGTCAGCCTTCACTGCTCCATGAACTGGGTCATGTCTT 1109
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                                                                                                                                                            TGACCACTTTGACACAGCCATTCTGTTCACCCGGCAGGACCTGTGTGGGGGTCTCCACTTG 186
                                                                            TGACACCCTGGGTATGGCTGATGTGGGCACAGTGTGTGATCCAGCTAGGAGCTGTGCTAT 246
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NIH-MCC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MCC)
Unpublished (1999)
Contact: naturational institutes
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Tissue Procurement: Gilbert Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE912007 681 bp 601662774F1 NCI_CGAP_mam1 Mus m
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/strain="FVB/N"
/db_xref="taxon:10090"
/cione="thMAGE:3962877"
/cione_lib="NCI_CGAP_Man1"
/tisue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH10B"
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Site_2: NotI; Cloned unidirectionally. Primer: Oligo of
Library constructed by Life Technologies. Investigator
providing samples: Gilbert Smith, NIH"
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Dias NetO,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvelho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                        Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESD/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scrilpts/gethtml2.pl?tl=PMI&t2=PMI-EN0065-
191100-007-c01&t3=2000-11-19&t4-1)
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Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                      /note="Organ: lung_normal; Vector: pucl8; Site_1: Smal; Site_1: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the puc 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                            /clone_lib-"EN0065"
                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
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Bos taurus
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Mammalia; E
                                                                                                       BACKWARD: GTTTTCCCAGTCACGACG
Plate: 16 row: B column: 16
Seq primer: ATTTAGGTCACACTATAG
                                                                                                                                                                                                                   Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
v0.980904.e. Vector identified by cross_match with the -min
                                                                                                                                                                                                                                                                        USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, US
Tel: 402 762 4366
Fax: 402 762 4390
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21180013
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/db_xref="taxon:9913"
/clone_lib="MARC 2BOV"
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Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
/tissue_type="pooled"
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RESULT 5
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                                                                                       http://lmage.llnl.gov
Plate: LLAM11878 row: 1 column:
                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                            BI691035
603309806F1 NCI_CGAP_Mam6
                                                                          High
                                                                                                                   DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                      1 (bases 1 to 700)
NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
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/note="Vector: pCMV SPORT6; Site_1: Not1; Site_2: Sa Library made from pooled tissue from testis, thymus, semitendonosus muscle, longissimus muscle, pancreas, adrenal, and endometrium."

137 c 126 g 82 t
/organism-"Mus musculus"
/strain-"FVB/N"
/db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                            Eutheria;
1 to 700)
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Pred. No. 1.4e-69;
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                                                    BI602707
BI602707.1
                                                                              mRNA
Homo sapiens
Eukaryota; Metazoa;
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603252051F1 NIH_MGC_96 Homo.
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/clone_lib="NCI_CGAP_Mam6"
/sex="female, virgin"
/tissue_type="infiltrating d
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note**Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sa. Site_2: Not1; Cloned unidirectionally. Primer: Oligo of Library constructed by Life Technologies. Investigator providing samples: Jeffrey Green, M.D., NIH*

a 210 c 213 g 147 t
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                                                                                                                       ACTCCGGTGTGCAGGTCGAGGGGCCTGACAGTGCAGTACCTGGGCCAGGCGCCTGAGCTGC 364
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                                                                                                                                                                                                                                                                                                                                                                                                   381;
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Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NH
Toshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
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National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL http://image.llnl.gov plate: LLAM11769 row: e column: 13
  BF850605
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Clone distribution: MGC clone distribution information can
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="hypothalamus"
/lab_host="DH10B"
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/clone_lib="NIH_MGC_96"
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/db_xref="taxon:9606"
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Pred. No. 7.3
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Query Match
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TTGACACAGCCATTCTGTTTACCCGTCAGGACCTGTGTGGAGTCTCCACTTGCGACACGC 997
                                                                                                                                 CTCCATGACACTCCAAGCCATGCATC-AGTTTGAATGGGCCTTTGAGCACCTCTCGCCA 1175
                                                                                                                                                                                                                                   ATGATGGGCTCC-AGTCAGCCTTCACTGCTGCTCATGAACTGGGTCATGTCTTCAACATG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl7tl=PM1&t2=PM1-EN0065-
191100-007-f12&t3-2000-11-19&t4=1)
Seq.primer: puc 18 forward
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Eukaryota; Metazoa;
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High quality sequence stop: 344.
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/db_xref="taxon:9606"
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M
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Tissue Procurement: CLONTECH Laboratories, Inc
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Clone distribution: MGC clone distribution information can
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//lab_host="DH10B (TI phage-resistant)"
//lab_host="DH10B (TI phage-resistant)"
//note="Organ: lung; Vector: pDNR-LIB (Clontech); Site_1:
//note="Organ: lung; Site_1: Site_1: Site_1: post-resistant lung; Site_1: post-resista
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/clone="IMAGE:4693587"
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                                             11 Similarity 61. 453; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                Clone distribution: MGC clone distribution information can be fo
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 9 Row: b Column: 7
This clone has the following problem: frame shifted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: amg@bcm.tmc.edu
Gunaratne, P.H., Garcia, A.M., Lu, X.,
Yoon, V.S., Kowis, C.R., Lawrence, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Contact: MGC help desk
Email: Ggapbs-remail.nih.gov
Email: Ggapbs-remail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (
DNA Sequencing by: Baylor College of Medicine Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (20-FEB-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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Mus musculus, Similar to a disintegrin-like and metalloprotease
(reprolysin type) with thrombospondin type 1 motif, 1, clone
IMAGE:3499206, mRNA.
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                                                                                                                                                                                                                    /tissue_type="Mammary tumor. C3(1)-Tag model.
ductal carcinoma. 5 month old virgin mouse."
/clone_lib="NCI_CGAP_Mam6"
                                                                                                                                                     /note="Vector: pCMV-SPORT6"
812 c 811 g 600 t
                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
/db_xref="taxon:10090"
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                                                                                                                                                                                                  /lab_host="DH10B"
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                                          Score 273.2; DB 11; Length 2931; Pred. No. 2.7e-52; 0; Mismatches 278; Indels 3;
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Martin, R.G., Muzn
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Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bala,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
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                                                                               Simpson, A.J.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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                Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhin; Hominidae; Homo. 1 (bases 1 to 573)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., 2ago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein;A., deOllveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                         BQ353240
BQ353240.1
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This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=PMl&t2=PMl-EN0065-
191100-006-a01&t3=2000-11-19&t4-1)
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Tel: +55-11-2704922
Fax: +55-11-2707001
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Ludwig Institute for Cancer R
Simpson, A.J.
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Pred. No. 9.6e-51;
0; Mismatches 6;
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KEYWORDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            255;
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DKFZp686A228_rl 686 (synonym: hlcc3) Homo
DKFZp686A228 5', mRNA sequence.
AL712592
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This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtm12.pl7t1=PM2&t2=PM2-HT0927-
290900-005-h09&t3=2000-09-29&t4=1)
Seq primer: puc 18 forward
High quality sequence stop: 571.
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer R
          Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 645)
                                                                           EST
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 Poustka,A.,
                                                  Homo sapiens
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/clone_lib="HT0927"
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Wellenreuther, R.,
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Pred. No. 4.3e-43;
D; Mismatches 2;
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                       Craniata; Vertebrata; Catarrhini; Hominidae;
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Mewes, H.W.,
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and Wiemann, S.)
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Best Local Similarity
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41683 MARC 3BOV Bos taurus cDNA
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AW357906.1 GI:6861917
Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkry, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Pertea, G., Holt, I., Karamycheva, S., Liang, F., O
                                                                                             Bos taurus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: poustka@mpimg-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German
Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg
sequenced by DKFZ (German Cancer Research Center,
                                                     1 (bases 1 to 274)
Smith, T.P.L., Grosse, W.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Max-Planck-Institute for Molecular Genetics Ihnestrasse 73, 14195 Berlin, Germany Tel: +49-30-84131623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Contact: Poustka A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Berlin-Charlottenburg, GERMANY;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST (Poustka, A., S.)
                                                                                           Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Please contact the RZPD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This clone (DKFZp686A228)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No s1 sequence available.
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cDNA-collection"
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/db_xref="taxon:9606"
/clone="DKFZp686A228"
/clone_lib="686 (synonym:
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/dev_stage="adult"
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Ressourcenzentrum, Heubnerweg 6, 14(
                                Freking, B.A.,
,J., Cho,J., F
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5e-41;
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                     Fahrenkrug,S.C., Bennett
rer,G.A., Chitko-McKown,C
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   Quackenbush, J.
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                                                         Stone,
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                                                                                                                Bovoidea;
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Best Local S
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                                                                                                                                                                                                                                                                                                              CCTTTGAGCACCTCTCGCCATGTCATGGCCCC 1187
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PO Box 166, Clay Co
Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                          BF853210
BF853210.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
235; Conserv
l (bases 1 to 452)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
                                                                        Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                    BF853210 452 bp mrt
MR2-EN0092-191200-007-g04 EN0092 Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, US
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21180013
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle
                                                                                                                            human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: Sall; Library made from pooled tissue from marrow, alveolar macrophage, ovary, fetal semitendonosus muscle, and fetal longissimus muscle."

80 g 60 t 2 others
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/tissue_type="pooled"
/lab_host="DH10B"
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/db_xref="taxon:9913"
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Pred. No. 3.9e-39;
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ie88g09.yl Melton Normalized Human l
cDNA clone_IMAGE:5674169 5' similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
Laboratory of Cancer Genetic
Ludwig Institute for Cancer
Rua Prof. Antonio Prudente 1
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                 Melton, D., Brown, J.,
                              Mammalia; Eutheria;
1 (bases 1 to 574)
                                                             Eukaryota; Metazoa;
                                                                             Homo sapiens
                                                                                                                            BM069747.1
                                                                                                                                        PROTEIN. [1] ;, mRNA sequence. BM069747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: +55-11-2704922
   Lemishka,I.,
                                                                                             human.
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/dev_stage="Adult"
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   Scearce, M.,
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96.8%;
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                                             Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                 Kenty,G.,
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 Brestelli,J.,
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e 109, 4 and
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                 Permutt, A., Lee, C.,
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   Gradwohl, G.,
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GGTCATGTCTTCAACATGCTCCATGACAACCTCCAAGCCATGCATCAGTTTGAATGGGCCT 1158
                                                                                                                                                                                               CTCTTAGACCAACCCGAGGCTCCCTTGCATCTGCCTGTGACT
                                                                                                                                                                                                                            CTCTTAGACAAACCAGAGGCTCCATTGCATCTGCCTGTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                  TTGAGCACCTCTCGCCATGTCATGGCCCCTGTGATGGCTCATGTGGATCCTGAGGAGCCC
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                                                                                                                                                                                                                                                                                                      TGGTCCCCCTGCAGTGCCCGCTTCATCACTGACTTCCTGGACCATGGCTATGGGCACTGT
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This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry seem in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl-MR2&t2-MR2-EN0092-
191200-007-g04&t3=2000-12-19&t4=1)
Seq.primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Organ: lung_normal; Vector: pucl8; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
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Pred. No. 2.7e-38;
bp mRNA linear EST 12-MAR-24
Human Islet 4 N4-HIS 1 Homo sapiens
similar to TR:075173 075173 KIAA0688
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                            Homo sapiens
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Kaestner,K., Clifton,S.,

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JOURNAL COMMENT
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563 GAGATCGTGTTT 574
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                                                                                                                                                                                                                                                                                                                 GAGATCGTGTTT
                                                                                                      Unpublished (2000)
Other_ESTs: le88g09.x1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept. of Molecular and Cellular Biology, 7 Divinity Ave. Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (brownefas harvard edu) This sequence now available from the IMAGE consortium, for clone orders contact: info@image.linl.gov High quality sequence stop: 440.

Location/Qualifiers
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Library was constructed by Dr. Bouglas Melton DNA sequencing by:
Washington University Genome Sequencing Center For information o
obtaining a clone please contact: Juliana Brown
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                                                                                                                                                                                                                                                                                                                                                                                                                          14.1%; Score 192; DB 13; Length 574; ilarity 100.0%; Pred. No. 6.8e-34; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-*Organ: Pancreas; Vector: pSPORT1; Site_1: Not 1; Site_2: Sal 1; Starting library constructed using SuperScript Plasmid Library kit (Life Technologies). cDNA made by oligo-dT priming. Size-selected by column fractionation; average insert size 1.08 kb. Library was amplified once on solid support and plasmid DNA from library was prepared. The library DNA was normalized by method #4 from Bonaldo, Lennón, and Soares 1996 Genome Research 6:791-806; 0.5 micrograms single-stranded library plasmid DNA was mixed with 5 micrograms PCR product representing library inserts and hybridized to an Ecot of 20. Single-stranded (unhybridized) plasmids were isolated by hydroxyapatite chromatography and used to make this
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/db_xref="taxon:9606"
/clone="IMAGE:5674169"
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/dev_stage="Adult"
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Sequence 351, App	Description

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ALIGNMENTS

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SEQ ID NO 351
LENGTH: 4407
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Best Local Similarity
Matches 1330; Conserv
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Publication No. US200300083;
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Godowski, Paul (
APPLICANT: Godowski, Paul (
APPLICANT: Gurney, Austin I
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; ORGANISM: Homo
US-10-176-758-351
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Best Local
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APPLICANT:
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APPLICANT:
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CURRENT APPLICATION NUMBER: US/10/176,758
CURRENT FILING DATE: 2002-06-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prior Application removed - NUMBER OF SEQ ID NOS: 612
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GCATCTCTGCACTGGGATGGGGGAGCCCTGTTAGGCGTGTTACAATATCGGGGGGCCTGAA
                                  GGTGGAGCAGAGCCTGGCACCTACCTGACTGGCACCATCAATGGAGATCCGGAGTCGGTG
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Godowski, Paul J.
Gurney, Austin L.
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Pred. No. 0;
0; Mismatches
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RESULT 3
US-10-175-737-351
Sequence 351, Application US/10175737
Publication No. US20030013153A1
GENERAL INFORMATION:
APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Chen, Jian
APPLICANT: Goddard, Audrey
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APPLICANT: Godowski, Paul J.
APPLICANT: Gurney, Austin L.
APPLICANT: Pan, James
APPLICANT: Smith, Victoria
APPLICANT: Smith, Victoria
APPLICANT: Watanabe, Colin K.
APPLICANT: Wood, William I.
APPLICANT: AND TRANSMEMBRANE POLYPEPTIDES AND TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C50
CURRENT APPLICATION NUMBER: US/10/175,737
CURRENT FILING DATE: 2002-06-19
Prior APPLICATION TEMPOVED: See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 351
LENGTH: 4407
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; ORGANISM: HOMO
US-10-175-737-351
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Best Local Similarity
Matches 1330; Conserv
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Pred. No. 0;
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Query Match Best Local :

Local Similarity

96.98;

Score 1316 Pred. No. (

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Length

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APPLICANT: Zhang, Zemin
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRAN
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P34307ALC7
CURRENT APPLICATION NUMBER: US/10/173,706
CURRENT FILING DATE: 2002-06-17
PITOR APPLICATION NUMBER: See File Wrapper
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 351
LENGTH: 4407
                                                                                                                                                                                                                                                               US-10-173-706-351
; Sequence 351, Application US/10; Publication No. US20030022293A1; GENERAL INFORMATION:
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LENGTH: 4407
TYPE: DNA
ORGANISM: HOMO 9
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audre
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APPLICANT: Chen, Jian
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J
APPLICANT: Gorney, Austin I
APPLICANT: Gurney, Austin I
APPLICANT: Pan, James
APPLICANT: Pan, James
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Best Local Similarity 98.4
Matches 1330; Conservative
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-10-175-738-351
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CURRENT APPLICATION NUMBER: US/10/175,738
CURRENT FILING DATE: 2002-06-19
CURRENT FILING DATE: 2002-06-19
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  TACAAGGACGACGATGACAAGGGGTAGGTCGA 1358
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GGCAAGGACTATGATGCTGACCGCCAGTGCCA 1767

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; Prior Application removed -
; NUMBER OF SEQ ID NOS: 612
; SEQ ID NO 351
; LENGTH: 4407
; TYPE: DNA
; ORGANISM: Homo Sapien
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CURRENT APPLICATION NUMBER: US/10/175,752
CURRENT FILING DATE: 2002-06-19
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Godowski, Paul J.
Gurney, Austin L.
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RESULT 7 US-10-176-482-351

Sequence 351, Applic Publication No. US20 GENERAL INFORMATION:

Application US/101764B2 o. US20030022296A1

APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian APPLICANT: Desnoyers, Luc

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> Desnoyers, Luc Goddard, Audrey Godowski, Paul

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Gurney, Austin Pan, James

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Smith, Victoria
Watanabe, Colin |
Wood, William I.
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CURRENT APPLICATION NUMBER: US/10/176,482
CURRENT FILING DATE: 2002-06-20
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Besnoyers, Luc
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SEQ ID NO 351
LENGTH: 4407
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APPLICANT:
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                                                Matches 1330;
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APPLICANT:
                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430RLC86
CURRENT APPLICATION NUMBER: US/10/176,757
CURRENT FILING DATE: 2002-06-20
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APPLICANT: Chen, Jian
APPLICANT: Chen, Jian
APPLICANT: Coddard, Andrey
APPLICANT: Goddwski, Paul
APPLICANT: Godowski, Paul
APPLICANT: Gurney, Austin I
APPLICANT: Pan, James
APPLICANT: Watanabe, Colin
APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P343ORIC66
CURRENT APPLICATION NUMBER: US/10/176,913
CURRENT FILING DATE: 2002-06-20
Prior Application removed - See file Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 351
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Best Local Similarity
Matches 1330; Conserv
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RESULT 10 US-10-180-552-351 "aruence 351, Application

US/10180552

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APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Gondard, Audrey
APPLICANT: Gurney, Austin L.
APPLICANT: Banth, Victoria
APPLICANT: Watanabe, Colin K.
APPLICANT: Watanabe, Colin K.
APPLICANT: Wood, William I.
APPLICANT: Lang Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRA
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C153
CURRENT APPLICATION NUMBER: US/10/180,552
CURRENT APPLICATION NUMBER: US/10/180,552
CURRENT FILING DATE: 2002-06-25
PHIOT APPLICATION TEMOVED - See File Wrapper
NUMBER OF SEO ID NOS: 612
SEO ID NO 351
LENGTH: 4407
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APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddwski, Paul J.
APPLICANT: Gurney, Austin L.
APPLICANT: Smith, Victoria
APPLICANT: Watanabe, Colin K.
APPLICANT: Watanabe, Colin K.
APPLICANT: Watanabe, Colin K.
APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POL
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: p3430R1C147
CURRENT APPLICATION NUMBER: US/10/180,557
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US-10-180-557-351
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APPLICANT: Wood, William I.

APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POI
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C14
CURRENT APPLICATION NUMBER: US/10/173,700
CURRENT FILING DATE: 2002-06-17
Prior Application removed - See File Wrapper or P.
NUMBER OF SEQ ID NOS: 612
SEQ ID NOS: 612
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APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Lu
APPLICANT: Goddard, Audr
APPLICANT: Goddwski, Pau
APPLICANT: Gurney, Austi
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US-10-174-572-351
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TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P343OR1C40
CURRENT EPLICATION NUMBER: US/10/174,572
CURRENT FILING DATE: 2002-06-18
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 351
LENGTH: 4407
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Best Local Similarity
Matches 1330; Conserv
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Godowski, Paul J.
Gurney, Austin L.
Pan, James
Smith, Victoria
Watanabe, Colin K.
Wood, William I.
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; Pred. No. 0; 
0; Mismatches
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RESULT 14 US-10-174-579-351

APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Goddowski, Paul

Desnoyers, Luc Goddard, Audrey Godowski, Paul J

GENERAL INFORMATION:

Sequence 351, Application US/10174579 Publication No. US20030027264A1

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                                         CCTGAGGAGCCCTGGTCCCCCTGCAGTGCCCGCTTCATCACTGACTTCCTGGACAATGGC
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CURRENT APPLICATION NUMBER: US/10/174,579
CURRENT FILING DATE: 2002-06-18
Prior Application removed - See File Wrapper
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 351
LENGTH: 4407
TYPE: DNA
ORGANISM: Homo Sapien
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APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C31
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ilarity 98.48;
Conservative
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NUMBER OF SEQ ID NOS: 612
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Publication No.
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Query
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APPLICANT:
                                                                                                                                  APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED
TITLE OF INVENTION: ACIDS EN
FILE REFERENCE: P3430R1C36
                                                                                                            CURRENT APPLICATION NUMBER: US/10/174,582
CURRENT FILING DATE: 2002-06-18
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                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin APPLICANT: Chen, Jian
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Goddard, Audrey
Godowski, Paul J
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Gurney, Austin L.
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1435	TGTGTGGAGTCTCCACTTGCGACACGCTGGGTATGGCTGATGTGGGGCACCGTCTGT	1376	Вb
1026	ACCTGTGTGGAGTCTCCACTTGCGACACGCTGGGTATGGCTGATGTGGGCACCGTCTGT	967	Qy
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1195	CGCTACCTGCTAACAGTGATGGCAGCAGCAGCAGCGCTTCAAGCACCCCAAGCATCCGC CGCTACCTGCTAACAGTGATGGCAGCAGCAGCAGCATCCAAGCATCCAAGCATCCAAGCATCCAAGCATCAAGCATCAAGCATCAAGCATCCAAGCATCAAGCATCAAGCACCCAAGCATCCAAGCATCAAGCACCCAAGCATCCAAGCATCAAGCATCAAGCACCCAAGCATCAAGCAAG	1136	g 4
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1436 GACCCGGCTCGGAGCTGTGCCATTGTGGAGGATGATGGGCTÇCAGTCAGCCTTCACTGCT 1495
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Search completed: April 26, 2003, 09:49:47 Job time: 327.363 secs

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OM protein - protein search, using sw model
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April 21, 2003, 14:30:17; Search time 16.7668 Seconds (without alignments) 1217.071 Million cell updates/sec
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Title:
Perfect score:
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US-10-050-200-9
2614
1 MLLGWASLLLCAFRLPLAAV.....LDLPRKQILGGDYKDDDDKG 492

Scoring table:

Searched:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 112892

112892 seqs, 41476328 residues

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

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Pfam; PF01421; Reprolysin; 1.

Pfam; PF01562; Pep_M12B_propap; 1.

SMART; SM00209; TSP1; 2.

PROSITE; PS50215; ADAM_MEPRO; 1.

PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.

PROSITE; PS50092; TSP1; 1.
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MIM; 6
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EMBL; AP001697; BAA95503.1;
EMBL; AF141293; AAF02493.1;
HSSP; Q9PW35; 1BUD.
MEROPS; M12.225;
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InterPro: IPR002870; Pep_M12B_propep.
InterPro: IPR001590; Reprolysin.
InterPro: IPR001884; TSP1.
InterPro: IPR000130; Zn_MTpeptdse.
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TISSUE SPECIFICITY: EXPRESSED AT LOW LEVEL, PRIMARILY IN BUT ALSO IN OTHER TISSUES, SUCH AS HEART AND BRAIN, AND CERVIX, UTERUS, BLADDER, ESOPHAGUS, RIB CARTILAGE, CHONDROBLASTOMA, FIBROUS TISSUE AND JOINT CAPSULE FROM A ARTHRITIC PATIENT:

DOMAIN: THE SPACER DOMAIN AND THE TSD TVDB-1 POWATT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is ified and this statement is not removed. Usage by and foittes requires a license agreement (See http://www.isb-sib.send an email to license4sb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     site.
COFACTOR:
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SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROTEOLYTIC PROCESSING MOSTLY DURING THE PERI-IMPLANTATION PERIOD CATALYTIC ACTIVITY: Cleaves aggrecan at the 392-Glu-|-Ala-393
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A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
     930
                    21; ADAMTS5
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TSP TYPE-1 2.
POLY-ARG.
POLY-ARG.
N-LINKED (GLCNAC.
N-LINKED.
N-> L (IN REF. 2)
N-> L (IN REF. 2)
N-> L (IN REF. 2)
                                                                                                                                                                                                                                 ADAMTS-5.

CYSTEINE SWITCH (
ZINC (CATALYTIC)
BY SIMILARITY.
ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
                                                                                                                                                                                                                                                                                                                                                                                                 Zinc;
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TSP TYI
                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                CYS-RICH.
                                                                                                                                                                                                                                 ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                   Signal;
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                                                                                                                                                                                                                                                                                                                                                                                                 Glycoprotein;
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) (BY SIMILARITY).
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     CRC64;
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(POTENTIAL)
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                                                                   (POTENTIAL)
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Best Local S
Matches 481
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098001;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-5 precursor (EC 3,4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 5) (ADAM-TS 5) (ADAM-TS5) (Aggrecanase-2)
                                                   zinc metalloproteases.";

J. Blol. Chem. 274:25555-25563(1999).

J. BLOL. Chem. 274:25555-25563(1999).

-i. FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, AND MAY BE-
-i. FUNCTUCUED IN ITS TURNOVER. MAY PLAY AN IMPORTANT ROLE IN THE
DESTRUCTION OF AGGRECAN IN ARTHRITIC DISEASES. MAY PLAY A ROLE IN
PROTEOLYTIC PROCESSING MOSTLY DURING THE PERI-IMPLANTATION PERIOD.

-i. CATALYTIC ACTIVITY: Cleaves aggrecan at the 392-Glu-1-Ala-393
                  <del>;</del> <del>;</del> <del>;</del>
                                                                                                                                          MEDLINE=99395124; PubMed=10464288; Hurskainen T.L., Hirohata S., Seldin "ADAM-TS5, ADAM-TS6, and ADAM-TS7, no
                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE=99395124;
                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                       NCBI_TaxID=10090
                                                                                                                                                                                                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                           ADAMTS5
Site.
- COFACTOR: BIN:
1- SUBCELLULAR I
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similarity)
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Rodentia;
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Pred. No. 1.7e
0; Mismatches
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Sciurognathi; Muridae;
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novel members
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DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00090; tsp_1; 2. Pfam; PF01421; Reprolysin; 1. Pfam; PF01562; Pep M12B_Propep; SMART; SM00209; TSP1; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
DOMAIN
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InterPro; IPR002870; Pep_M12B_propep.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000184; TSP1.
InterPro; IPR000130; Zn_MTpeptdse.
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SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMASIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
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DOMAIN: THE SPACER DOMAIN AND THE
FOR A TIGHT INTERACTION WITH THE E
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MILGWAS-----LLICAFRLPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEVQERA
                                                                                        EPPGHPHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAG-FV
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                                                                                                                                                                                                                           Similarity
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PS50092;
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PS00427; DISINTEGRIN_1;
e; Metalloprotease; Zinc;
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Pred.
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N-LINKED
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TSP TYPE-1
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ZINC (CATALYTIC)
DISINTEGRIN-LIKE
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ZINC (CATALY)
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ADAMTS-5.
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Signal; Glycoprotein; Zymogen;
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A FURIN ENDOPEDTITE
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nes 53;
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RESULT 3
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Q9HH18; Q9UP80; Q9UH83; Q9PZKO; Q9NSJ8;
30-MAY-2000 (Rel. 39, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-1 precursor (EC 3.4.24-) (A dislotegrin and metalloproteinase with thrombospondin motifs 1) (ADAM-TS 1) (ADAM-TS1) (METH-1).

ADAMTS1 OR METHL OR KIAA1346.
                                     TISSUB-Brain;
MEDLINE-20181126; PubMed-10718198;
Nagase T., Kikuno R., Ishikawa K.-I.,
"Prediction of the coding sequences of
The complete sequences of 150 new cDN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Cloning, characterization and
orthologue of murine Adamts-1."
                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
TISSUE=Endothelial cells;
MEDLINE=20247184; PubMed=10785405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                   Rosenthal A., Thierauch K.H.;
Differential gene expression
                                                                                                                                                                                                                                                                                                                   Glienke J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lombardo M., Iruela-Arispe "METH-1, a human ortholog c family of proteins with ang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted
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  large proteins in vitro.";
Res. 7:65-73(2000).
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                                                                                                                                                                                                                      Biochem.
                                                                                                                                                                      FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                            Chem.
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(JUL-1999) to the EMBL/GenBank/DDBJ
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., Thierauch K.H.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       an ortholog of ADAMTS-1, an eins with angio-inhibitory 274:23349-23357(1999).
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                                                                                                                                                                                                                        :2820-2830(2000).
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                                               -I., Hirosawa M., Ohara O., es of unidentified human ge cDNA clones from brain whi
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on human chro
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NA Park H.-S., Toyoda A., Ishii K., Totoki Y., Choi D.-K., Seeda E.,
A Ohki M., Takagi T., Sakaki Y., Taudlen S., Blechschmidt K., Polley
A Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D.,
A Reichwald K., Rump A., Schillhabel M., Schudy A., Zimmermann W.,
A Rosenthal A., Kudoh J., Shibuya K., Kawasaki K., Asakawa S.,
A Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonrakis S.E.
A Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,
A Minoshima S., Schoen O., Desario A., Reichelt J., Kauer G., Bloecker
A Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagand E
A Wehrmeyer S., Borzym K., Gardiner K., Nizetic D., Francis F.,
A Lehrach H., Reinhardt R., Yaspo M.-L.;
"The DNA sequence of human chromosome 21.";
                                                                                                                                                                                                                                                                                                                             EMBL: AF170084; AAF15317.1; -.
EMBL: AF060152; AAD48080.1; ALT_INIT.
EMBL; AF207664; AAF23772.1; -.
EMBL: AB037767; BAA92584.1; ALT_INIT.
EMBL: AB037767; BAA92582.1; -.
EMBL: AP001697; BAA95502.1; -.
EMBL: AL162080; CAB82413.1; -.
MEROPS; M12.222; -.
GENEW; HGNC:217; ADAMTS1.
Hydrolase; I
Repeat; Ext
SIGNAL
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SEQUENCE FROM P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blum H., Bauersachs S., Mewes H.-W., Weil B., Wiemann S.;
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, AND MAY BE
INVOLVED IN ITS TURNOVER (BY SIMILARITY). HAS ANGIGGENIC INHIBITOR ACTIVITY. ACTIVE METALLOPROTEASE, WHICH MAY BE ASSOCIATED WITH VARIOUS INFLAMMATORY PROCESSES AS WELL AS DEVELOPMENT OF CANCER CACHEXIA. MAY PLAY A CRITICAL ROLE IN FOLLICULAR RUPTURE.
-!- CATALYTIC ACTIVITY: CLEAVES AGGRECAN AT THE 1938-GLU-|-LEU-1939-SITE, WITHIN THE CHONDROITIN SULEATE ATTACHMENT DOMAIN.
-!- COPACTOR: BINDS 1 ZINC ION (BY SIMILARITY)
-!- SUBCELLULAR LOCATION: Secreted. Associated with the extracellular matrix (By similarity).
-!- DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORTANT FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
-!- DTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Blum H., E
Submitted
                  Pfam; PF00090; tsp_1; 6.

Pfam; PF01421; Reprolysin; 2.

Pfam; PF01421; Reprolysin; 2.

Pfam; PF01562; Pep_M12B_propep; 2.

SMART; SM00209; TSP1; 3.

PROSITE; PS001215; ADAM_MEPRO; 1.

PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.

PROSITE; PS00142; TSPL; 2.

PROSITE; PS00142; ZINC_PROTEASE; 1.

Hydrolase; Metalloprotease; Zinc; Signal; Glycoprotein; Zymogen; Repeat; Extracellular matrix; Heparin-binding.
                                                                                                                                                                                                                                                                                                             Genew;
                                                                                                                                                                                                            InterPro: IPR001762; Disintegrin.
InterPro: IPR002870; Pep_M12B_propep.
InterPro: IPR001590; Reprolysin.
InterPro: IPR000884; TSP1.
InterPro: IPR000130; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are the European Bioinformatics Institute.
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[6]
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY).
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 3 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                 605174;
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ki Y., Choi D.-K.,
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RESULT 4
ATSI_MOUSE STANDARD; PRT; 968 AA.
ID ATSI_MOUSE STANDARD; PRT; 968 AA.
AC P97857; 054768;
DT 30-MAY-2000 (Rel. 39, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DE ADAMTS-1 precursor (EC 3.4.24.-) (A disintegrin and the sequence with thrombospondin motifs 1) (ADAM-TS 1) (ADAM-TS 1)
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MEDLINE-9930357; PubMed-10373500; Kuno K., Terashima Y., Matsushima K.; "ADAMTS-1 is an active metalloproteinase extracellular matrix."; J. Biol. Chem """;
modified entities
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J. Biol. Chem. 272:556-562(1997).
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E. Natl. Acad. Sci. U.S.A. 97:4689-4694(2000).

FUNCTION: CLEAVES AGGRECAN, A CARTILLAGE PROTEOGLYCAN, AND MAY BE INVOLVED IN ITS TURNOVER. HAS ANGIOGENIC INHIBITOR ACTIVITY (BY SIMILARITY). ACTIVE METALLOPROTEASE, WHICH MAY BE ASSOCIATED WITH VARYOUS INFLAMMATORY PROCESSES AS WELL AS DEVELOPMENT OF CANCER VARYOUS INFLAMMATORY PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF CANCER OF THE PROCESSES AS WELL AS DEVELOPMENT OF THE PROCESSES AS DEVELO
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DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS AR FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX. FOR A TREE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE. FIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.

SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN. SIMILARITY: CONTAINS 1 TSP TYPE-1 DOMAINS. CAUTION: REF. 2 SEQUENCE DIFFERS FROM THAT SHOWN DUE TO FRAMESHIFT IN POSITION 7.
                               European Bioinformatics Institute. The by non-profit institutions as long ified and this statement is not removed
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SUBCELLULAR LOCATION: SECRETED. ASSOCIATED WITH THE EXTRACELLUL
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exon/intron organization and protein with TSP
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Pfam; PF01421; Reprolysin; 1.
Pfam; PF01562; Pep_M12B_propep;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
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                       ARQVELLLVADASMARLYGRGLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKD
                                                RGSGGAKCGVMDDETL-PTSDSRPESQNTRNQWPVRDPTPQDAGKPSGPGSIRKKRFVSS
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IPR002870; Pep_M12B_propep.
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oprotease; Zinc; Signal; Glycoprotein;
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-1 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 1) (ADAM-TS 1) (ADAM-TS1).
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                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-Sprague-Dawley; TISSUE-Liver;
MEDLINE-20304099; PubMed-10847486;
Diamantis I., Luethi M., Hoesli M., Reichen
"Cloning of the rat ADAMTS-1 gene and its do
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Induction of a disintegrin and metalloprotease with the thrombospondin type I motif (ADAMTS).";
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Little S.P.;
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INDICTION: DOWN REGULATED IN ENDOTHELIAL CELLS DERIVED FROM CIRRHOTIC LIVER.
DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORAIN THE SPACER DOMAIN THE EXTRACELLULAR MATRIX.
FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
                                                                                                                                                                                                                                                                                SIMILARITY).

CAPALYTIC ACTIVITY: CLEAVES AGGRECAN AT THE 168:
SITE, WITHIN THE CHONDROITIN SULFATE ATTACHMENT
COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).

SUBCELLULAR LOCATION: Secreted. Associated with
                                                                                                                                 SIMILARITY: CONTAINS SIMILARITY: CONTAINS
                                                                                                                                                                SIMILARITY).
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B
                                                                                   SWISS-PROT entry is copyright. It is produced through the Swiss Institute of Bioinformatics and the EN
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                                                                                                    collaboration
                                                                                      outstation
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EMBL; AF304446;
MEROPS; M12.222;
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PROSITE; PS00142; ZINC_PROTEASE; 1.
PROSITE; PS50092; TSP1; 2.
PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF01421; Pfam; PF01562;
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 295
                 304
                                   249
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                                                                                                                                                            93
                                                                                                                                          84
HPSIRNSISLVVVKILVIYEEQKGPEVTSNAALTLRNFCSWQKQHNSPSDRDPEHYDTAI
                                                                                                       ALSLCEGVRGAFYLOGEEFFIOPAPAVATERLVPAEPKEESIAPPRFHILRRRRRGSGGA
                                                                                                                                                     AGGRRFLLDLERDGSVGTAGF----VPAGGGTSA----PWRHRSHCFYRGTVDGSPRSLA
                 HASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAI
                                           LSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRGLQHYLLTLASIANRLYS
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                                                                                       RILHVYTREGFSFEALPP----RASCETPASTPEAHEHAPAHSNPSGRAALASQLLDQSA
                                                                                                                         VFDLCGGLDGFFAVKHARYTLKP------LLRGPWAEEE------KGRVYGDGSA
                                                                                                                                          AFGQQLHLKLQPDSGFLAPGFTLQTVGRSPGSEAQHLDPTGDLAHCFYSGTVNGDPSSAA
                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Extracellul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; IPR001762; Disintegrin.
; IPR002870; Pep_M12B_prope;
; IPR001590; Reprolysin.
; IPR000884; TSP1.
; IPR000130; Zn_MTpeptdse.
                                                                                                                                                                                                               249
262
607
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967
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559
616
725
858
908
                                                                                                                                                                             Conservative
                                                                     -GVMDEETLPTSNSGRESQNTPDQWPLRNPTPQGAGKPTGPGSI----
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Pep_M12B_propep;
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AAG29823.1;
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Pep_Ml2B_propep.
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N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
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                                                                                                                                                                            Score 810; DB
Pred. No. 4.1e
53; Mismatches
                                                                                                                                                                                                                                                                                                                                                               ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
TSP TYPE-1 1.
CYS-RICH.
SPACER
TSP TYPE-1 2.
TSP TYPE-1 3.
                                                                                                                                                                                                                                CYSTEINE SWITCH (POTENTIAL).
ZINC (CATALYTIC) (BY SIMILAR
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILAR
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> P (IN REF. 2).
> TR (IN REF. 2).
> G (IN REF. 2).
> C (IN REF. 2).
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(BY SIMILARITY)
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RESULT
ATS8_HU
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                                     EMBL; AF060153; AAD48081.1; -
EMBL; AF175283; AAF25806.1; -
HSSP; P34179; 1IAG.
MEROPS; M12.226; -
Genew; HGNC:224; ADAMTS8.
MIM; 605175; -
                                                                                                                                                                                              This SWI
between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATS8_HUMAN STANDARD; PRT; 890 AA. 09UP79; Q9NZS0; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) ADAMTS-8 precursor (EC 3.4.24.-) (A disintegrin and relation thrombospondin motifs 8) (ADAM-TS 8) (ADAM-TS8)
                                                                                                                                                                                                                                                                                                                                                                            HUMAN
    InterPro;
InterPro;
                                                                                                                            use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-20079168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 195-440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-99367466; PubMed-10438512;
                            nterPro;
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                                                                                                                                                                              s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                   SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOI SIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                   DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS AFFOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX. PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE
                                                                                                                                                                                                                                                                                                                                                  matrix (By similarity).
TISSUE SPECIFICITY: HIGLY EXPRESSED IN ADULT.
                                                                                                                                                                                                                                                            SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B
                                                                                                                                                                                                                                                                        SIMILARITY).
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                                                                                                                                                                                                                                                                                                                                          EXPRESSION IN BRAIN,
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IPR001762; Disintegrin.
IPR002870; Pep_M12B_propep.
IPR001590; Reprolysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=10610729;
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Primates;
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pfam; PF01421; Reprolyysin; 1.
pfam; PF01562; Pep_M12B_propep;
smarr; SM00209; TSP1; 2.
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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InterPro;
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 472
                   366
                                     412
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  LLDLPR
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                                                                                                                                             ALASQLLDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGRGLQHYLL
                                                                                                                                                                       LQRWGPAGARPLPRGPEWEVETGEGQRQE---
                                                                                                                                                                                                                              TSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGGLDGFFAVKHARYTLKPL-LRGPWAEEEK 178
                                                                                                                                                                                                                                                                                                       LLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAAQPRRRQGEEVQERAEPPGHPHPLAQR
                                    IGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNC
                                                                          DDHEEHYDAAILFTREDLCGHHS-CDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHE
                                                                                                                                                                                         GRVYGDGSARIL-----HVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSGRA
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                                                                                                                                                                                                                                                                                       LLLLLLPLARGAPARPAA - - - GGQ - - - ASELVVPTRLPG - - -
                   LGHVLSMPHDDSKPCTRLFGPMGKHHVMAPLFVHLNQTLPWSPCSAMYLTELLDGGHGDC
                                                        DRHPEHYDTAILLTRQNFCGQEGLCDTLGVADIGTICDPNKSCSVIEDEGLQAAHTLAHE
                                                                                                                                                                                                                                                                                                                             al Similarity
187; Conser
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    SAGELALHLSAFGKGFVLRLAPDDSFLAPEFKIERLGGSGRATGG

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                matrix;
                                                                                                                                                                                                                                                                                                                            58;
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N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
E -> R (IN REF. 2)
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x; Heparin-binding.
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Pred.
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BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY.
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KQILGGDYK
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No. 3.9e-4
                                                                                                                                                                                                                                                                                                                                                                                                                                            (GLCNAC.
                                                                                                                                                                       RGDHQEDSEEESQEEEAEGASEPP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glycoprotein; Zymogen;
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YB)
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426 LLDAPGAALPLPTGLPGRMALYQLDQQCRQIFGPDFR 462

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GCOTGIAGUS K.E., HITCHAER S., SEIGHIN M.F., APTE S.S.;

"ADAM-TS8, a novel metalloprotease of the ADAM-TS family located on mouse chromosome 9 and human chromosome 11.";
Genomics 62:312-315(1999).

-1- FUNCTION: HAS ANTI-ANGIOGENIC PROPERTIES (BY SIMILARITY).
-1- COPACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
-1- SUBCELLULAR LOCATION: SECRETED.
-1- SUBCELLULAR LOCATION: SECRETED.
-1- TISSUE SPECIFICALLY IN ADULT LUNG AND HEART AND LOW EXPRESSION DURING MOUSE DEVELOPMENT.
-1- DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORTANT FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
-1- POMAIN: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
                                                                                                                                            Repeat;
SIGNAL
                                                                                                                                                                                      PROSITE; PS00142; ZINC_PROTEASE; 1.
PROSITE; PS50215; ADAM_MEPRO; 1.
PROSITE; PS50092; TSP1; 1.
PROSITE; PS00427; DISINTEGRIN_1; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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16-OCT-2001 (Rel. 40, Created)

16-OCT-2001 (Rel. 40, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)

ADAMTS-8 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase

with thrombospondin motifs 8) (ADAM-TS 8) (ADAM-TS8) (METH-2).
                                                                                                                                                                                                                                                     Pfam; PF00090; tsp_1; 2.
Pfam; PF01421; Reprolysin; 1.
SMART; SM00209; TSP1; 2.
                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF175282; AAF25805.1; HSSP; P34179; 1IAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE 20079168; PubMed 10610729;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
                                                                                                                                                                            Hydrolase;
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                                                                                                                                                                                                                                                                                                 InterPro; IPR001762; Disintegrin. InterPro; IPR001590; Reprolysin. InterPro; IPR00184; Tspl. InterPro; IPR0008130; Zn_MTpeptdse
                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:1353468;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B. SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIS. SIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
                                                                                                                                                          Extracel
                                                                                                                                                                       Metalloprotease; Zinc; Signal;
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                                                                                                                                                            matrix;
ZINC (CATALYTIC)
BY SIMILARITY.
ZINC (CATALYTIC)
ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
TSP TYPE-1 1.
CYS-RICH.
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                                                                                                                                                                    Glycoprotein; Zymogen;
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                                             (BY SIMILARITY)
(BY SIMILARITY)
                                                                                         SIMILARITY).
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RESULT 8 ATS4_HUMAN ID ATS4_HUMAN AC 075173; Q9UNG DT 16-OCT-2001 DT 16-OCT-2001 DT 15-JUN-2002 DE ADAWTS-4 prec DE with thrombos DE (ADMP-1). GN ADAWTS4 OR KI OS HOMO Sapiens OC EUKaryota; Me OC Manmalia; EUK OX NCBI_TaxID=96 RN [1] RP SEQUENCE FROM RC TISSUE-Brain; RX MISHIKAWA K. 1 RA KOTANÍ H., NC RT The Complete RT Code for large	Oy 342 CK Db 309 CS Oy 401 GL H Db 369 GL Oy 461 TE Db 429 TE	Oy 173 Db 145 SI Oy 223 P- Db 194 Dr Oy 282 L1 Db 249 F1	61 52 113	Cat EOCHOLN
NN STANDARD; 99UN83; 901 (Rel. 40, Cre 901 (Rel. 40, Las 902 (Rel. 41, Las precursor (EC 3, mmbospondin motif R KIAA0688. kens (Human), j Metazoa; Chord Eutheria; Prima ED=9606; FROM N.A. ain; FROM N.A. **FROM N.A. **A.** **I. Nagase T. Nomura N. Oha ion of the coding ete sequences of the sequences of the coding ete sequences of large proteins i	CKWQHQHNQLGDDHEEHYDAAILFTREDLCGH-HSCDTLGMADVGTICSPERSCAVIED	SLDQPHRLQRWGPGQRREDPGLAAAEVF	SLLLCAFRLPL : PLLLLLLQLP- LAQRRRSKGLV LA AGGGTSAPWRH	706 847 848 905 415 415 480 480 506 506 615 615 905 AA; 98879 MW 905 AA; 33.5%;
PRT; 837 AA. ated) t sequence update) t annotation update) 4.24) (A disintegrin and s 4) (ADAM-TS 4) (ADAM-TS4 s 4) (ADAM-TS 4) (ADAM-TS4 sta; Cranlata; Vertebrata; tes; Catarrhini; Hominidae	TREDLCGH-HSCDTLGMADVGTIC	EKGRYYGDGSARILHVYTREGFSFEALDPRASCETPASTPEAHEHA ::	ACTIVE 01: MISMATCHES 185: INGELS 105: G AAVGPAATPAQDKAGQPPTAAAAAQPRRROGEEVQERAEPPGH	PACER. SP TYPE-1 2LINKED (GLCNACLINKED (GLCNACLINKED (GLCNACLINKED (GLCNACLINKED (GLCNAC124D4132B33AOCAE . 124D4132B33AOCAE . CORE 732.5; DB 1; red. No. 2e-46;
d metalloproteina 4) (Aggrecanase 1 ; Euteleostomi; e; Homo. e; Homo.	VIEDD 4 : : VIKDE 3 TSATI 4 ::: ::		1 1 8 1 5 6 9	OTENTIAL). OTENTIAL). OTENTIAL). OTENTIAL). Lh 905;
S to the second	28 6 6 00	222 193 281 248 341	SS 11; SO 51 S1 12 S8 8	

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InterPro; IPR001762; Disintegrin.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000884; TSP1.
InterPro; IPR000130; Zn_MTpeptdse.
Pfam; PF001421; Reprolysin; 1.
SMART; SM00209; TSP1; 1.
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"ADAMTS-4
                                    PROSITE;
PROSITE;
PROSITE;
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                                                                                                                                                                                                                            EMBL; AB014588; BAA31663.1;
EMBL; AF148213; AAD41194.1;
EMBL; AY044847; AAL02262.1;
MEROPS; M12.221; -.
Genew; HGNC:220; ADAMTS4.
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J. Biol. Chem. 275:25791-25797(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tortorella M.D., Pratta M.A., Liu R.-Q., Abbaszade Burn T.C., Arner E.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PARTIAL SEQUENCE, AND CHARACTERIZATION MEDLINE-20400518; PubMed-10827174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Liu R.-Q., Rosenfeld S.A., Copeland R.A., Decicco C.P., Wynn I Rockwell A., Yang F., Duke J.L., Solomon K., George H., Brucki Nagase H., Itoh Y., Ellis D.M., Ross H., Wiswall B.H., Murphy Hillman M.C. Jr., Hollis G.F., Newton R.C., Magolda R.L., Trzaskos J.M., Arner E.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A MEDLINE-99286303;
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     Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAUTION: HAS SOMETIMES BEEN REFERRED TO AS ADAMTS2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INDUCTION: BY INTERLEUKIN-1.

DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE POR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX. FOR THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE. SIMILARITY: BELONGS TO PEPTIDASE FAMILY MIZB. SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.

SIMILARITY: CONTAINS 1 TSP TYPE-1 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 matrix (By similarity).
TISSUE SPECIFICITY: EXPRESSED
AT VERY LOW LEVEL IN PLACENTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3101. Chem. 275:25791-25797(2000).

FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, AND MAY INVOLVED IN ITS TURNOVER. MAY PLAY AN IMPORTANT ROLE IN THE DESTRUCTION OF AGGRECAN IN ARTHRITIC DISEASES. COULD ALSO BE CRITICAL FACTOR IN THE EXACERBATION OF NEURODEGENERATION IN ALZHEIMER'S DISEASE.
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                                                                                                                                                                                                               603876;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ., Nagase H., Saklatvala J., Clark genomic locus.";
                                  PS00142; ZINC_PROTEASE;
PS50215; ADAM_MEPRO; 1.
PS50092; TSP1; 1.
PS00427; DISINTEGRIN_1; FALSE_NEG.
s; Metalloprotease; Zinc; Signal; Glycoprotein; Zymogen;
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Murphy K.,
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Homo sapiens (Human)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

ATS9_HUMAN STANDARD; PRT; 1629 AA.

G9P2N4; O9NR29;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-9 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 9) (ADAM-TS 9) (ADAM-TS9).

ADAMTS9 OR KIAA1312.

RESULT 9 ATS9_HUMAN

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                                                                                       HNQLGDDHEEHYDAAILFTREDLCGHHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFT
                                                                                                                             QHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQ : ||||::|:|| :: :| :|| ||::|| ||
                                                                                                                                                       VPAGGGTSAPWRHRSHCFYRGTVDGSPRSLAVFDLCGG-LDGFFAVKHARYTLKPLLRGP 172
GYGHCLLDKPEAPLHLPVTFPGKDYDAD
                GHGNCLLDLPRKQI-----LGGDYKDD
                                     AAHELGHVFNMLHDNSKPCISLNGPLSTSRHVMAPVMAHVDPEEPWSPCSARFITDFLDN
                                                        VAHEIGHLLGLSHDDSKFCEETFGSTEDKR-LMSSILTSIDASKPWSKCTSATITEFLDD
                                                                          KRYLLTVMAAAAKAFKHPSIRNPVSLVVTRLVILGSGEEGPQVGPSAAQTLRSFCAWQRG
                                                                                                                                                                                                                   WAEEEKGRVYGDGSARILHVYTREGFSFEALPPRASCETP--ASTPEAH---EHAPAHSN
                                                                                                                                                                                                                                       APELLGGAEP ---- GTYLTGTINGDPESVASLHWDGGALLGVLQYRGAELHLQPLEGG 168
                                                                                                                                                                                                                                                                                               PLAORRRSKGLVONIDOLYSGGGKVGYL--VYAGGRRFLLDLERDGSVGIAGF-----
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172; Conserv
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A -> T (IN REF. 1).
R -> Q (IN REF. 3).
G -> R (IN REF. 3).
G -> R (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                          Score 658.5; DB 1
Pred. No. 5.2e-41;
3; Mismatches 156
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CYS-RICH.
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BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CYSTEINE SWITCH (POTENTIAL)
ZINC (CATALYTIC) (BY SIMILA
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                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                           Indels 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                              837;
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                              407
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                                     418
                                                         466
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Repeat;
SIGNAL
PROPEP
CHAIN
DOMAIN
                                                                                                              pfam; pF01421; Reprolysin; 1.
pfam; pF01562; rep_m12B_propep; 1.
smarr; sM00209; rspl; 12.
prosite; ps50215; ADAM_MEPRO; 1.
prosite; ps50215; ADAM_MEPRO; 1.
                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                       PROSITE; PS50092; TSP1; 9.
PROSITE; PS00142; ZINC_PROTEASE; 1.
                                                                                                                                                                             InterPro: IPR001762: Disintegrin.
InterPro: IPR002870: Pep_M12B_propep.
InterPro: IPR001590: Reprolysin.
InterPro: IPR0001590: Reprolysin.
InterPro: IPR000884: TSP1.
InterPro: IPR000130: Zn_MTpeptdse.
Pfam: PP00090: tsp_1; 11.
                                                                                                                                                                                                                                                                                                EMBL; AB037733; BAA92550.1; HSSP; P15167; lATL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nagase T., Kikuno R., Ishikawa K.-I., Hirosawa M., Ohara O.; "Prediction of the coding sequences of unidentified human genes. XVI The complete sequences of 150 new cDNA clones from brain which code
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                          EMBL; AF261918; AAF89106.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clark M.E., Kelner
                                                                                                                                                                                                                                                                         Genew;
                                                                                                                                                                                                                                                                                    MEROPS; M12.02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-20181126; PubMed-10718198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [2]
SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADAMTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-20396138; PubMed-10936055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).

SUBCELLULAR LOCATION: Secreted. Associated with the extracellul matrix (By similarity).

matrix (By similarity).

ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND SHORT FORM; MAY BE PRODUCED BY ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN ALL FETAL TISSUES.

EXPRESSED SLIGHTLY IN ADULT OVARY, PANCREAS, HEART, KIDNEY, LUN PLACENTA. ALSO DETECTED IN SPINAL CORD AND BRAIN. NOT DETECTED PLACENTA. ALSO DETECTED IN SPINAL CORD AND BRAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY).

SIMILARITY: BELONGS TO PEPTIDASE FAMILY M121
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOM.
SIMILARITY: CONTAINS 11 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY).
PTM: THE PRECURSOR IS CLEAVED BY A FURIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORTANT FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        large proteins in vitro.";
Res. 7:65-73(2000).
                                                                                                                                                                                                                                                            W; HGNC:13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMAHL
                                                                                                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through a centre the Swiss Institute of Bioinformatics and the EMBL
                                                                Extracellular matrix;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9, a novel
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                                                                            Metalloprotease;
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                                                                                                                                                                                                                                                                        202; ADAMTS9
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587
642
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                                                                           Zinc;
BY SIMILARITY.
ADAMTS-9.
DISINTEGRIN-LIKE.
TSP TYPE-1 1.
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                                                    POTENTIAL
                                                             inc; Signal; Glycoprotein; Zymogen;
Alternative splicing.
                                                                                                                  FALSE_NEG
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ing as its content is in
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3 LGWASLLLCAFRLPLAAVGPAATPAQDKAGQPPTAAAAAQPRRRQGEEVQ------
                           KFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQ 479
                                                                                   FTREDLC-GHHSCDTLGMADVGTICSPERSCAVIEDDGLHAAFTVAHEIGHLLGLSHDDS
                                                                                                                                               ASIENHIRLAVVKVVVLGDKDKSLEVSKNAATTLKNFCKWQHQHNQLGDDHEEHYDAAIL
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NKCKEE-GVKSPQHVMAPTLNFYTNPWMWSKCSRKYITEFLDTGYGECLLNEPESR
                                                                                                                                                                                                NKTDNTREKRTHRRTKRFLSYPRFVEVLVVADNRMVSYHGENLQHYILTLMSIVASIYKD
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CLVTCGKGH -> VRWEGCYFP (
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BY SIMILARITY.
ZINC (CATALYTIC)
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CHARLYTICO
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Pred. No.
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SPACER.
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15-JUN-2002 (Rel. 41,
15-JUN-2002 (Rel. 41,
15-JUN-2002 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                    This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "ADAMTS-4 (a disintegrin and metalloproteinase with thrombospondin motifs) is transcriptionally induced in beta-amyloid treated rat astrocytes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAWTS-4 precursor (EC 3.4.24 °) (A disintegrin and metalloproteinase
with thrombospondin motifs 4) (ADAM-TS 4) (ADAM-TS4) (Aggrecanase 1)
                                                                                                                                                                                                           Pfam; PF00090; tsp_1; 2.
Pfam; PF01421; Reprolysin; 1.
SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                 InterPro; IPR001762; Disintegrin. InterPro; IPR001890; Reprolysin. InterPro; IPR000884; Tspl. InterPro; IPR0000130; Zn_MTpeptdse
                                                                                                                                                                                                                                                                                                    EMBL; AB042272; BAB16474.1; -. EMBL; AB042271; BAB16473.1; -. EMBL; AB042273; BAB16475.1; -.
                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neurosci. Lett.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=20415831;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=Wistar;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10116;
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                                                                                                                  Extracellular NON_TER
                                                                                                                                              Hydrolase;
                                                                                                                                                          PROSITE;
                                                                                                                                                                       PROSITE;
                                                                                                       PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE SPÈCIFICITY: ÔNLY EXPRESSED IN BRAIN.
DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-I DOMAINS AR
FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
FOR THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 1 TSP TYPE-1 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Eleropean Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        matrix (By similarity).
TISSUE SPECIFICITY: ONI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, INVOLVED IN ITS TURNOVER. MAY PLAY AN IMPORTANT ROLE DESTRUCTION OF AGGRECAN IN ARTHRITIC DISEASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COFACTOR: BINDS 1 ZINC ION (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATALYTIC ACTIVITY: Cleaves aggrecan at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NE=20415831; PubMed=10961658;
K., Suzuki N., Yokota H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9ESP8; Q9ESP6;
                                                                                                                                                        PS00427;
                                                                                                                                                                                  PS50215; ADAM_MEPRO; PS50092; TSP1; 1.
                                                                                                                                            Metalloprotease;
 154
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                                                                                                                                                        ZINC_PROTEASE;
DISINTEGRIN_1;
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                        BY SIMILARITY.
ADAMTS 4.
ZINC (CATALYTIC)
BY SIMILARITY.
ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
TSP TYPE-1.
CYS-RICH.
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Sciurognathi; Muridae;
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Best Local
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CARBOHYD
SEQUENCE
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                                                                                                                                                                                                                                     This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zinc Metalloproteases.",
J. Biol. Chem. 274:25555-25563(1999).
-I- COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
-I- SUBCELLULAR LOCATION: Secreted. Associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAWTS-7 precursor (EC 3.4.24.-) (A disintegrin and multiple of the composition of the composi
                  EMBL; AF140675;
HSSP; P15167; 11
MEROPS; M12.231;
                                                                                                   the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                             matrix (By similarity).

-!- TISSUE SPECIFICITY: EXPRESED IN HEART, BRAIN, PLACENTA, LUNG, LIVER, SKELETAL MUSCLE, KIDNEY, PANCREAS.
-!- DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORTANT FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.
-!- PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hurskainen T.L., Hirohata S., Seldin
"ADAM-TS5, ADAM-TS6, and ADAM-TS7, No
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9UKP4;
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               MEROPS;
                                                                                                                                                                                                                 between
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- SIMILARITY: |
- SIMILARITY: |
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een the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
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Pred. No. 4.5e-36;
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N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
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Best Local :
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InterPro; IPR000884; 7
InterPro; IPR000130; 7
Pfam; PF00090; tsp_1;
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PROSITE; PS00427; DISINTECRIN_1; FALSE_NEG.
PROSITE; PS00427; DISINTECRIN_1; FALSE_NEG.
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LYDAAPLTWSRCSRQYITRFLDRGWGLCLDDPPAKDII
                   TSIDASKPWSKCTSATITEFLDDGHGNCLLDLPRKQIL
                                                  KITHHADNTLKSFCKWQKSINMKGDAHPLHHDTAILLTRKDLCAAMNRPCETLGLSHVAG
                                                                                          ELLLVADASMARLYGR-GLQHYLLTLASIANRLYSHASIENHIRLAVVKVVVLGDKDKSL
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                                      MCQPHRSCSINEDTGLPLAFTVAHELGHSFGIQHDGSGNDCEPV-----GKRPFIMSPQL
                                                                                                                        ETLVVADAKMVEYHGQPQVESYVLTIMNMVAGLFHDPSIGNPIHITIVRLVLLEDEEEDL
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; SM00209; TSP1; 2.
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IPR001590;
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DISLITEGRIN LIKE.
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RESULT 12
AT12_HUMAN
                                                                                                       PROSITE; PS50215; PROSITE; PS00427; PROSITE; PS50092; PROSITE; PS00142; PROSITE; PS00142; PROSITE; PS00142; PROSITE; PS00142; PS0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cal S., Argueelles J.M., Fernandez P.L., Lopez-Otin C.;
"Identification, characterization, and intracellular processing of
ADAM-TS12, a novel human disintegrin with a complex structural
organization involving multiple thrombospondin-1 repeats.";
J. Biol. Chem. 276:17932-17940(2001).
J. Biol. Chem. 276:17932-17940(2001).
J. SCOFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
J. SUBCELLULAR LOCATION: Secreted. Associated with the extracellular
matrix (By similarity).
TISSUE SPECIFICITY: Expressed exclusively in fetal lung. Is widely
                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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P58397;
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Pfam; PF011421; ReprolySin; 1.

Pfam; PF01562; Pep_M12B_propep;

SMART; SM00209; TSP1; 8.
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                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
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MEDLINE-21264577; PubMed-11279086;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-12 precursor (EC 3.4.24.) (A disintegrin
                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
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SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 8 TSP TYPE-1 DOMAINS.
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DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE I DOMAINS FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX SIMILARITY).
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                                                  se; Metalloprotease; Z
Extracellular matrix.
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IPR001590;
IPR000884;
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                                     LSHLSGMCQPHRSCNINEDSGLPLAFTIAHELGHSFGIQHDGKENDCEPVG--RHPYIMS
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DISINTEGRIN-LIKE.
TSP TYPE-1 1.
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Pred. No. 5.8e-29;
2; Mismatches 185
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GLCNAC. .
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GLCNAC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GLCNAC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1593;
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                                                                                                                                                                                                                                                                                                                                                                                                                          112;
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В
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AT10_HUMAN
Q9H324;
                                                                                                                                                                                       PROSITE: PS50215; PROSITE: PS50092; PROSITE: PS00142; PROSITE: PS00427; PROSITE: PS00427;
Repeat; E
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METAIN
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ACT_SITE
METAL
DOMAIN
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DOMAIN
                                                                                                                                                                                                                                                                           Pfam;
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                                                                                                                                                                                                                                                                                                                                                   Genew; HGNC:13201;
                                                                                                                                                                                                                                                                                                                                                             MEROPS; M12.23
                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                            between
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                                                                                                                                                                                Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                           PF00090; tsp_1;
                                                                                                                                                                   Extracellul
 208
366
370
370
376
376
434
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578
521
521
799
922
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"ADAM-TS10: a novel member of the ADAM-TS family contain thrombospondin type I repeats.";
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases
-:- COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
-:- SUBCELLULAR LOCATION: Secreted. Associated with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J91347,
15-JUN-2002 (Rel. 41, Creaceu,
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-10 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 10) (ADAM-TS 10) (ADAM-TS10) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF01421; Reprolysin; 1.
Pfam; PF01562; Pep_M12B_propep;
SMART; SM00209; TSP1; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001762; Disintegrin.
InterPro; IPR002870; Pep_MI2B_propep.
InterPro; IPR001590; Reprolysin.
InterPro; IPR000884; TSP1.
InterPro; IPR000130; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF163762; AAG35563.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS 5 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Encuropean Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        matrix (By similarity).

DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE 1 DOMAINS ARE FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX (B)
                                                                                                                                                                                                                                                                                                                                     S00142; ZINC_PROTEASE; S00427; DISINTEGRIN_1; I Metalloprotease; Zinc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                            ADAM_MEPRO; 1.
TSP1; 2.
       207
1077
366
367
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376
520
679
802
577
860
918
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                                                                                                                                                                                                                                                                                                                     matrix.
ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
CYS-RICH.
SPACER.
TSP TYEE-1 1.
TSP TYPE-1 2.
TSP TYPE-1 3.
TSP TYPE-1 4.
                                                                                                                                                                                                    ADAMTS-10.
ZINC (CATALYTIC)
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                        Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1077
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                                                                                                                                                          (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                          Zymogen;
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Best Local
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SEQUENCE FROM N.A. MEDLINE=20092827; FG Curtis C.L., Hughes Caterson B.;
                                                                                                                                                                          O9TT92:
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-5 (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin mottifs 5) (ADAM-TS 5) (ADAM-TS 1) (ADAM-TS 11) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
                                                     Biochem.
                                                                                   MEDLINE-99333677;
                                                                                                                    Bovidae; Bovinae;
NCBI_TaxID=9913;
                                                                                                                                        Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pe
                                                                                                                                                                                                                                                             ATS5
                                                                                                                                                                                                                                                                        BOVIN
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                                                                         Flannery
                                                              'Expression of ADAMTS homologues
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                                                                                                                                                                                                                                                             _BOVIN
                                                                                                                                                                                                                                                                                                                                                        AAHITMKTNPFVWSSCNRDYITSFLDSGLGLCLNNRPPRODFVYPTVAPGQAYDADEQ
                                                                                                                                                                                                                                                                                                                                                                                                                 VSKNAATTLKNFCKWQH------QHNQLGDDHEEHYDAAILFTREDLCGHHS--CDTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHPLAQRRRSKGLVQNIDQLYSGGGKVGYLVYAGGRRFLLDLERDGSVGIAGFVPAGGGT 120
                                                                                                                                                                                                                                                                                                                                    SSILTSIDASKPWSKCTSATITEFLODGHGNCLLDLPRKQ-----ILGGDYKDDDDK
                                                                                                                                                                                                                                                                                                                                                                                                                                            TLVVADKMMVAYHGRRDVEQYVLAIMNIVAKLFQDSSLGSTVNILVTRLILLTEDQPTLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WAEEEKGR--VYGDGSARILHVYTREGFSFEALPPRASCETPASTPEAHEHAPAHSNPSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --SAPWRH--RSHCFYRGTVDGSPRSLAV-FDLCGGLDGFFAVKHARYTLKPLLRGP--- 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPPPRRQRRGTGA-----
                                                                                                                                                                                                                                                                                                                                                                                                   TTHHAGKSLDSFCKWQKSIVNHSGHGNAIPENGVANHDTAVLITRYDICIYKNKPCGTLG: 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RSPEESGPHVVYKRSSLRHPHLDTACG---
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                                                     Biophys.
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           Hughes
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                                                                                     PubMed-10403768;
                                                                                                                               Bos.
                       PubMed-10625599;
                                                      Res.
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64
196
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28.98;
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           E
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                                                     Commun.
           Flannery
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68;
                                                   Hughes C.E., Caterson ogues in articular cart un. 260:318-322(1999).
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N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
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Pred. No. 2.7e-28;
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          C.R.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----VRDEKPWKGRP--
           Little
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           168;
                                                              cartilage.";
           <u>ი</u>
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                                                                                                                                         Pecora;
           в.,
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(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                   Euteleostomi;
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           Harwood
                                                                                                                                         Bovoidea;
           J.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                 452
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RESULT 15
ATS6_HUMAN
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Best Local (
                                                                                                                                                                                                                                       Matches
      Q9UKP5;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
ADAMTS-6 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase
with thrombospondin motifs 6) (ADAM-TS 6) (ADAM-TS6).
                                                                                                                                                                                                                                                                                     CARBOHYD
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                        DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                METAL
METAL
                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00090; tsp_1; 1.
Pfam; PF01421; Reprolysin;
SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           articular cartilage degradation.";
J. Biol. Chem. 275:721-724(2000).
-i- FUNCTION: CLEAVES AGGRECAN, A
                                                                              ATS6_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on if
                                                                                                                                                                                                                                                                                                                                                                       ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                          Hydro.
                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF192771; AAF07177.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "n-3 fatty acids specifically modulate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                463
                                                                                                                                                                                                               403
                                                                                                                                          61
                                                                                                                                                                                        --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY).
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
SIMILARITY: CONTAINS AT LEAST 1 TSP TYPE-1 DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            matrix (By similarity),
DOMAIN: THE SPACER DOMAIN AND
FOR A TIGHT INTERACTION WITH T
PTM: THE PRECURSOR IS CLEAVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          site.
COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
SUBCELLULAR LOCATION: Secreted. Associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DESTRUCTION OF AGGRECAN IN ARTHRITIC DISEASES. MAY PLAY A ROLE IN PROTEOLYTIC PROCESSING MOSTLY DURING THE PERI-IMPLANTATION PERIOD CATALYTIC ACTIVITY: Cleaves aggrecan at the 392-Glu-|-Ala-393
                                                                                                                                                                                                   HAAFTVAHEIGHLLGLSHDDSKFCEETFGSTEDKRLMSSILTSIDASKPWSKCTSATITE 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: CLEAVES AGGRECAN, A CARTILAGE PROTEOGLYCAN, INVOLVED IN ITS TURNOVER. MAY PLAY AN IMPORTANT ROLE
                                                                                                                                                                FLDDGHGNCLLDLPRKQILG
                                                                                                                                                                                        HAAFTVAHEIGHLLGLSHDDSKFCEENFGSTEDKRLMSSILTSIDASKPWSKCTSATITE
                                                                                                                                          FLDDGHGNCLLDLPRKQIPG
                                                                                                                                                                                                                                                                                                                                                                                                          lase;
                                                                                                                                                                                                                                      l Similarity
78; Conserv
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207
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                                                                               STANDARD;
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TSP1; 1.
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12
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164
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96
207
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97.5%;
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                                                                                                                                                                                                                                                                                                                       BY SIMILARITY.
ZINC (CATALYTIC)
ZINC (CATALYTIC)
ZINC (CATALYTIC)
DISINTEGRIN-LIKE.
TSP TYPE-1 1.
                                                                                                                                                                                                                                                                                                                                                                                                         Zinc;
                                                                                                                                                                                                                                                                                                            N-LINKED
                                                                                                                                                                                                                                                                                     E648BEA73A3F86EE
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THE EXTRACELLULAR MATRI
BY A FURIN ENDOPEPTIDA:
                                                                                                                                                                                                                                                                                                                                                                                                         Glycoprotein;
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                                                                              860
                                                                                                                                                                                                                                                                                                             (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                catabolic
                                                                                                                                                                                                                                     DB 1; 1
1.2e-23;
1es 2;
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(BY
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                                                                                                                                                                                                                                                                                                                                                                                                         Extracellular matrix.
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SIMILARITY).
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Homo sapiens (Human). Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;

Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.

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CHAIN
METAL
ACT_SITE
METAL
METAL
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                    CARBOHYD
CARBOHYD
                                                                                                                                                                                                                    Repeat;
SIGNAL
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DOMAIN
DOMAIN
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DOMAIN
                                                                                                                                                                                                                                                               PROSITE; PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hurskainen T.L., Hirohata S., Seldin M.F., Apte S.S.;
**ADAM-TS5, ADAM-TS5, and ADAM-TS7, novel members of a new family
Zinc Metalloproteases.**
J. Biol. Chem. 274:2555-25563(1999).
-!- COPACTOR: BINDS 1 ZINC ION (BY SIMILARITY).
                                                                                                                                                                                                                                                                                              Pfam; PF01421; Reprolysin; 1.
Pfam; PF01562; Pep_M12B_propep;
SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AF140674; AAD56357.1;
HSSP; P34179; 1IAG.
MEROPS; M12.230; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>+</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-99395124;
                                                                                                                                                                                                                                                                                                                               Pfam; PF00090; tsp_1;
                                                                                                                                                                                                                                                                                                                                                                                                        Genew; HGNC:222; ADAMTS6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                         Hydrolase;
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InterPro; IPR001590;
InterPro; IPR000884;
                                                                                                                                                                                                                                                                                                                                           nterPro;
                                                                                                                                                                                                                                                                                                                                                                     nterPro; IPR001762; Disintegrin.
nterPro; IPR002870; Pep_M12B_propep.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMASIMILARITY: CONTAINS 2 TSP TYPE-1 DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DETECTABLE IN A NUMBER OF OTHER TISSUES.

DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE ILEORA TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.

PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        matrix (By similarity)
TISSUE SPECIFICITY: EX
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                                                                                                                                                                                                                                                                          PS00142;
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                                                                                                                                                                                                                                                                                                                                         IPR000130; Zn_MTpeptdse.
                                                                                                                                                                                                                                         Metalloprotease;
                                                                                                                                                     22
245
403
404
407
413
                                                                                                                                                                                                                                                             ZINC_PROTEASE;
TSP1; 1.
                                                                                                                                                                                                                                                    DISINTEGRIN_1; FALSE_NEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=10464288;
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  97098
                                                                                                                                                                                                                                                                                                                                                   Reprolysin.
TSP1.
                                                                                                                                                                                                                                matrix.
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  MW.
                                                                                                                                                                                                                                          Zinc;
 N-LINKED; E572130
                    N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
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ZINC (CATALYTIC)
BY SIMILARITY.
                                                                                                                               DISINTEGRIN-LIKE TSP TYPE-1 1.
                                                                                               SPACER.
TSP TYPE-1
                                                                                    POLY - ARG
                                                                                                                      CYS-RICH
                                                                                                                                                                                                        BY SIMILARITY.
                                                                                                                                                    (CATALYTIC)
                                                                                                                                                                                                                                         Signal; Glycoprotein; Zymogen
 ED (GLCNAC.
                     (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
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ХВ)
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  CRC64;
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SIMILARITY)
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Best Local Similarity
Matches 116; Conser
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IAHEIVHNFGMNHDGIGNSCGRKVMKQQNYGSSHYCE
                                                         TIPENGIAHHDNAVLITRYDICTYKNKPCGTLGLASVAGMCEPERSCSINEDIGLGSAFT
                                                                            QLGDDHEEHYDAAILFTREDLCGHHS--CDTLGMADVGTICSPERSCAVIEDDGLHAAFT
                                                                                                                                                                                                  LLDQSALSPAGGSGPQTWWRRRRRSISRARQVELLLVADASMARLYGR-GLQHYLLTLAS
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                                                                                                                     IVAKLYRDSSLGNYVNIIVARLIVLTEDQPNLEINHHADKSLDSFCKWQKSILSHQSDGN
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29.2%;
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Pred. No. 7.1e-23;
3; Mismatches 148
                              ---DSKFCE
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437
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 860;
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Search completed: April Job time: 22.7668 secs 21, 2003,

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